DOCUMENT RESUME

ED 108 738 88 PS 007 917

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TITLE Saturday School's Impact on Students, Parents and Teachers: A Summary of Three Years of Research Findings.
INSTITUTION Ferguson-Florissant School District, Ferguson, Mo.
SPONS AGENCY Bureau of Elementary and Secondary Education (DHEW/OE), Washington, D.C. Div. of Plans and Supplementary Centers.
PUB DATE [74]
NOTE 115p.; For related documents, see ED 099 145-146, 100 512, 100 515, 101 835, and PS 007 918

EDRS PRICE MF-$0.76 HC-$5.70 PLUS POSTAGE
DESCRIPTORS Cognitive Development; Diagnostic Tests; *Handicapped Children; *Home Programs; Home Visits; Kindergarten Children; Learning Disabilities; Parent Attitudes; Parent Participation; Physical Development; *Preschool Education; *Preschool Programs; *Program Evaluation; Social Development; Teacher Evaluation
IDENTIFIERS Elementary Secondary Education Act Title III; ESEA Title III; Missouri; *Parent Child Education Program

ABSTRACT

This report presents the major outcomes of the Saturday School (a school and home learning program for 4-year-olds in a large suburban school district) during its first three years of operation. Data summarized indicates the program's impact on the children, especially those with learning problems, and the effect of the program on the attitudes, behaviors, and competencies of the parents and staff members. Program components include 3-hour morning or afternoon sessions on Saturdays; diagnosis of each child's cognitive, social, and physical development; use of parents as teacher aides; weekly home visits by teachers or specialists; and home activity guides for parents. Descriptions of the tests and forms used and summaries of the program results make up the bulk of the report. In all areas measured, students, parents, and teachers showed significant improvements. Test scores for both normal and handicapped students are compared. (ED)

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Saturday School's

impact

on

Students, Parents and Teachers

A summary of three years of
research findings

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PS007 917

the program

Saturday School is a school and home learning program enrolling over 75% of the district's four year olds, including those with special problems or handicaps. During the program's first three years, it reached more than 2200 children, with an average annual enrollment exceeding 700.

Saturday School is designed to meet successfully three primary objectives:

- Early identification and appropriate intervention to remediate or lessen any real or potential problems affecting learning.
- Enrich the home environment and improve parent competencies in working with and teaching the very young.
- Measurably contribute to each child's social, emotional and academic growth.

The program employs the following four-part approach to early education. . .

Diagnosis

THE NEEDS AND ABILITIES OF EVERY CHILD ARE ASSESSED at the start of the year. Approximately 40% of the children receive further testing and observation. Consultant specialists are also available to assist teachers as well as any parent and his child with problems, both at home and at school.

Saturday School

AT A HALF DAY SCHOOL ON SATURDAYS, all children, including those with special problems, participate in total group activities; then rotate in small groups to four different learning centers manned by a teacher or parent. Activities relate to language, math, motor, art, auditory and visual discrimination.

Home Teaching

WEEKLY HOME TEACHING VISITS, with one child or a few neighboring children, include the parent as well. During the hour visit, the teacher involves the child in learning activities and suggests home activities relating to each child's needs. Teaching specialists provide home teaching for children with varying handicapping conditions.

Parent Follow-up

AT HOME THROUGH THE WEEK parents informally continue with concept and skill development activities. Parents receive a weekly HOME ACTIVITY GUIDE that outlines in detail a number of "games" from which to choose. Parent and child also share leading library books. Parents grow measurably during the year in their abilities to work with young children.

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the evaluation

This monograph details the major outcomes of the Saturday School program during its first three years of operation on the four groups involved:

- All of the students enrolled in the program
- Students identified as having learning problems, who constitute in this report the primary target group
- Parents of Saturday School students
- The teaching staff.

This report will concern itself with the three-year evaluation results. A brief description of the program's evaluation procedures follows.

Procedure

IDENTIFYING CHILDREN WITH PROBLEMS

One unique objective of the Saturday School Program is to identify and treat those pupils who have learning problems. These learning problems could be due to a number of causes: learning disabilities, low intellectual functioning, mental retardation, emotional disorders, experiential deprivation or various physical disabilities.

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In order to identify as quickly as possible those students with problems needing special attention, all enrolled children were given a battery of three tests upon entry into the Saturday School Program. The tests measured each child's mental, language and perceptual age. In addition, parents were given behavior checklists which they used to rate their child's personal, social, language and motor skill development. After the first few weeks of classes, teachers rated pupils on self-esteem and adjustment to Saturday School.

On the basis of the information collected, specialists in learning disabilities, emotional problems and mental retardation tentatively identified pupils who gave some indication of learning problems. These pupils received further indepth diagnosis by the specialists. If pupils were found to have learning problems, the pupils and their parents were given specially designed programs to compensate for the assessed learning deficits.*

ASSESSING ALL STUDENTS' GROWTH

Data on student growth were gathered throughout each project year. . .

- Teachers rated each child after the first home teaching session on his attitude toward the session and achievement of concepts presented.
- At the end of each project year, pupils were retested, using the same screening battery they had been given upon entry into the program.
- They were also rated again by their teachers on self-esteem, school adjustment, home visit sessions, and skill development.
- In addition, before entry into kindergarten, parents rated their children on a checklist similar to that given prior to entry into the Saturday School program.

Thus, each pupil had pre and posttest results on a variety of measures which tapped both the cognitive and affective domains.

**For a more detailed description of the screening procedures, treatment attempts, as well as the results obtained by the children with severe problems affecting their learning, see the booklet, "Providing for the Preschool Child with Problems."*

FOLLOWING STUDENTS INTO KINDERGARTEN AND FIRST GRADE

Students who had attended the Saturday School program were also evaluated in both kindergarten and first grade on academic skill development and self-esteem. Data on Saturday School students were compared to those obtained for control pupils with no preschool experience and pupils with other preschool experience. These control groups were usually made up of pupils who had entered kindergarten and first grade in the district during the previous year.

RATING OF PARENTS

Parents were rated by their children's teachers after the first and last home teaching sessions on their attitudes toward the sessions, the teacher, and their children. In addition, parents were rated by the teachers on their competencies as teaching assistants at Saturday School sessions.

MEASURING TEACHER'S COMPETENCIES

At the beginning, middle and end of each project year, the Project Director rated the teachers on the adequacy of their teaching techniques and the quality of their interactions with parents and pupils.

Results

Because of the rather extensive evaluation of all of the program's participants, a vast amount of data has been collected during the first three years of project operation. What follows is a summary of what these data indicate about the program's impact on all of the children, including those with special problems or handicaps, in the areas of cognitive development, skill development, attitudes, self-esteem and behavior; as well as the program's effect on the attitudes, behaviors and competencies of the parents and staff.

impact

on students

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cognitive growth

One of the major objectives of the Saturday School program has been to foster the cognitive development of students during their year in the program, and then to assess their continued growth as they advance into kindergarten and the beginning primary grades.

Another particular concern of the project has been the early identification of those students with learning problems (the primary target group). Based upon early diagnosis, pupils with problems are identified and attempts are made to remediate their deficiencies. The students are also followed into kindergarten and the early elementary grades to determine whether the effects of the intervention are long lasting.

The results of the pre and posttesting during the program year, as well as the findings of the follow-up study are described in the following two chapters for all students, including those who were identified as having learning problems.

cognitive growth during the program year

MEASUREMENT OF MENTAL, LANGUAGE and PERCEPTUAL AGE

All enrolled students were administered a battery of three tests designed to obtain measures of each student's mental, language and perceptual ages at the beginning of each program year and again, seven months later, at the end of each program year.

- The Slosson Intelligence Test and the Beery Test of Visual Motor Integration were used during all three program years to obtain mental and perceptual ages.
- Three different tests were used to obtain language age:
  - Subtest 3 of the Sievers Differential Language Test during the first program year,
  - the Northwestern Syntax Scale during the second year, and
  - the Grammatic Closure Subtest of the Illinois Test of Psycholinguistic Abilities during the third year.

THE TEST RESULTS

A summary of the results for all pupils on whom both pre and posttest scores were obtained during the three project years is given in Table 1. It can be seen that there were statistically significant changes in all tests.

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Table 1

RESULTS OF THE PRELIMINARY SCREENING BATTERIES ADMINISTERED AT THE BEGINNING AND END OF EACH PROGRAM YEAR TO ALL SATURDAY SCHOOL STUDENTS*

Variable		Mean**	Standard Deviation	t***	p	Range of Scores
Mental Age						
Year I	Pre	61.60	10.29	51.03	<.01	24-92
	Post	77.40	10.76			39-112
Year II	Pre	63.29	10.52	53.44	<.01	24-96
	Post	78.95	11.58			24-114
Year III	Pre	62.76	10.46	50.61	<.01	24-100
	Post	77.54	11.83			24-120
Perceptual Age						
Year I	Pre	53.40	10.42	30.79	<.01	33-95
	Post	63.77	10.08			33-112
Year II	Pre	51.22	8.40	10.83	<.01	33-77
	Post	61.80	7.72			33-95
Year III	Pre	51.95	9.44	39.19	<.01	33-82
	Post	64.33	9.55			33-104
Language Age						
Year I	Pre	51.91	11.56	27.58	<.01	24-81
	Post	65.17	10.23			33-84
Year II (Receptive)	Pre	43.68	13.43	31.67	<.01	19-87
	Post	60.62	14.65			19-93
(Expressive)	Pre	43.06	16.03	33.10	<.01	21-93
	Post	59.65	16.22			21-93
Year III	Pre	59.93	12.02	28.99	<.01	24-116
	Post	70.41	12.98			24-120

*The Slosson Intelligence Test was used as the measure of mental age.

The Beery Test of Visual Motor Integration was used as the measure of perceptual age.

Subtest 3 of the Sievers was used as the measure of language age during the first project year, the Northwestern Syntax Scale was used during the second project year, and the Grammatic Closure Subtest of the ITPA was used during the third project year.

The number of pupils tested twice from the first project year was 752; from the second project year, 648 were tested twice; and 692 pupils were tested twice during the third project year.

**Scores are expressed in units of months.

***Paired observations t tests were used to compare means.

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Because the average chronological age of Saturday School pupils entering the program each year was 54 months, it was expected that pupils' average mental, language, and perceptual ages would also be approximately 54 months. However, as the data in Table 1 indicates:

- the average entering mental age for all three years was a little more than nine months higher than expected,
- the average perceptual age was slightly lower than expected, and
- the average language age varied widely, depending on which language test was used (from nearly 10 months below to nearly six months above what was expected).

Upon exit from each program year, the average chronological age was 61 months.

- The average mental age, obtained on exit seven months later, was approximately 78 months, 17 months higher than expected.
- The average perceptual age upon exit from the program was 63 months, two months higher than expected.
- The average language age upon exit from each program year varied widely: from 60 months (one month below that expected) to more than 70 months, (nine months above that expected).

In sum, during the three years of project operation, the total sample of all Saturday School students gained, on the average

- more than 15 months of mental age
- more than 11 months of perceptual age, and
- between 11 and 17 months of language age, depending on which language test was used.

A more detailed explanation of these gains follows.

00013

GOALS and GAINS

The major goal for each pupil during the seven month period between test administrations was a gain of at least eight months in mental, language, and perceptual age. Since one primary focus of the program was on the educationally disadvantaged child, it was necessary to identify "educationally disadvantaged" children. In the absence of specific criteria to establish who was "educationally disadvantaged," it was arbitrarily decided that pupils who scored in the lower third on the pretests would constitute an educationally disadvantaged group. Therefore, further analyses were made comparing the growth of pupils who entered in the low, middle, and top thirds on each of the standardized instruments. A summary of the changes for the total group, as well as for the three subsamples in the three program years, is presented here.

Mental Age

The Slosson Intelligence Test was used to obtain measures of mental age. When the scores of all Saturday School pupils who were both pre and posttested were inspected (N=2092), the following was observed about pupils who met or exceeded the project goal:

(1) More than 73% (N=1533) gained 11 months or more.

(2) About 5% (N=104) gained 10 months.

(3) Approximately 4% (N=81) gained 9 months.

(4) Approximately 4% (N=86) of the pupils gained the 8 months expected for them between the two testings.

The following was observed about the scores of students who failed to meet the project goal:

(1) Approximately 3% (N=67) gained 7 months during the 7 months between test administrations.

(2) About 9% (N=191) gained between 1 and 6 months.

(3) Only 1% (N=30) either showed no gain or regressed in their mental age scores.

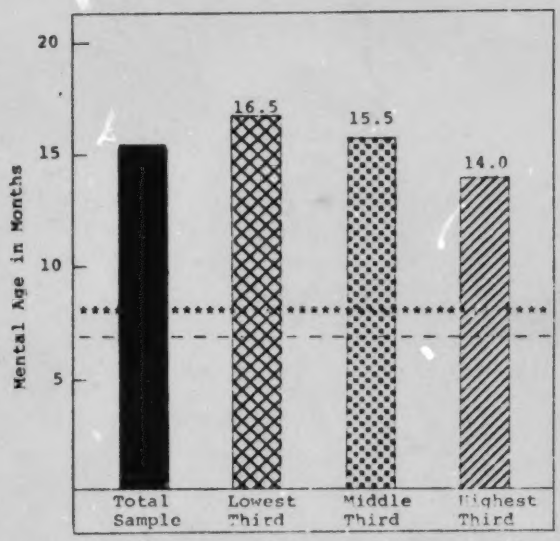
Altogether, 86% (1804 of the 2092 students) met or exceeded the expected eight months of mental age during the seven months between test administrations.

The preceding statements refer to all Saturday School pupils. When the pupils were divided into thirds on the basis of their entering mental age scores and gains inspected by high, middle, and low thirds (see Figure 1), it was noted that:

1. The lowest third of the pupils gained approximately 16.5 months during the seven month period between test administrations.
2. The middle third gained about 15.5 months.
3. The highest third gained nearly 14 months of mental age.

Figure 1

GROWTH IN MENTAL AGE



– –Expected Growth Over 7 Months
***Program Goal

In summary, there were only small absolute differences in gain scores on the Slosson Intelligence Test for the three groups. The greatest amount of change, however, was noted for those with the lowest entering scores:

The bottom third gained more than two months of mental age for each month in the Saturday School Program.

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Perceptual Age

The Beery Visual Motor Integration Test was used as the measure of perceptual age. The scores for all Saturday School pupils in the three years of project operation on whom both pre and posttest scores were obtained (N=2092) reveal:

(1) More than 49% (N=1027) gained 11 or more months.

(2) Around 6% (N=117) gained 10 months.

(3) About 4% (N=89) gained 9 months.

(4) Approximately 3% (N=67) gained the 8 months expected for them during the 7-month period between testings.

The following was noted about the scores of pupils who failed to meet the project goal:

(1) Approximately 8% (N=171) gained 7 months during the 7 months between test administrations.

(2) About 20% (N=427) gained between 1 and 6 months.

(3) Around 9% (N=194) showed either no gain or regressed in their perceptual age scores.

Altogether 62% (1300 of the 2092 pupils) met or exceeded the expected 8 months of perceptual age during the 7 months between test administrations.

This overall figure, however, does not tell the whole story. When results from the three project years are looked at separately, a different picture emerges:

. During the first year, 57% of the pupils reached or exceeded the project goal.

. In the second year, the total was 61%.

. In the third year, over 70% of the pupils met or exceeded the criterion set for them.

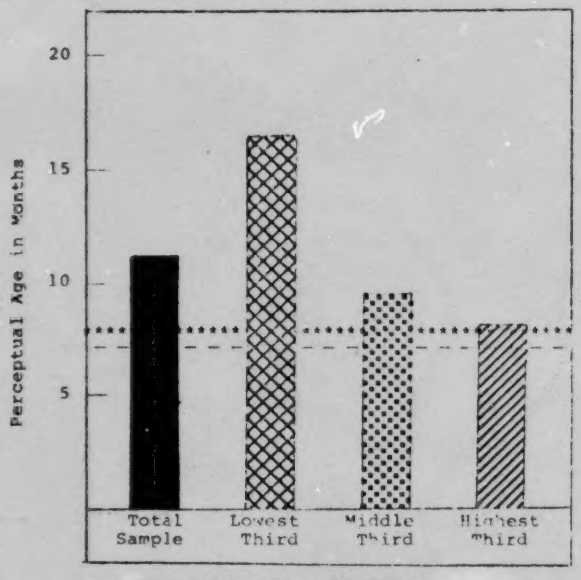
THUS, THERE WAS A STEADY INCREASE IN THE NUMBER OF PUPILS MEETING THE PROJECT CRITERION.

The preceding refers to all Saturday School pupils. When the pupils were divided into thirds on the basis of their entering perceptual age scores and gains inspected by high, middle, and low thirds (See Figure 2), the following were found:

1. The lowest third of the pupils gained nearly 16.5 months during the seven-month period between test administrations.
2. The middle third gained approximately 9.5 months.
3. The highest third gained around 8 months.

Figure 2

GROWTH IN PERCEPTUAL AGE



– – Expected Growth over 7 Months
*** Program Goal

In summary, there were considerable differences among the three groups in the amount of gain on the Beery Visual Motor Integration Test.

⇨ The pupils in the lowest group gained twice as much as pupils in the middle and highest groups.

Pupils with lowest entering scores gained nearly 2.5 months for each month between testings. The middle and upper groups gained approximately 1.25 months for each month in the Saturday School Program.

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Language Age

The assessment of "Language Age" has been a difficult task for this project---primarily because an instrument with sufficient reliability as well as content validity has been hard to obtain. It is our assumption that other projects have had, or will have in the future, similar difficulties. We, therefore, explain in some detail how we have solved the problem. To the reader whose interest lies not in this area, we beg your indulgence and suggest that you either skim for highlights, look at the results, or skip to the next section.

Different standardized instruments were used during each of the three project years. The results of each year, as well as the reasons for changing the tests, are presented separately for each project year as follows.

Language: The First Project Year

During the first year, the Word Association Subtest of the Sievers Differential Language Test was used as the measure of language age. A summary of the differences between pre and posttest scores for those pupils who received both administrations (N=752) showed the following:

1. About 56% (N=422) gained 11 or more months.
2. Approximately 11% (N=79) gained 9 months during the 7 months between testings.
3. Around 16% (N=120) gained between 1 and 6 months of language age during the 7 months.
4. Approximately 17% (N=131) either did not change their scores or regressed.

Altogether 67% (501 of the 752 pupils) met or exceeded the expected 8 months of language age during the 7 months between test administrations.

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When pupils were divided into thirds on the basis of their entering language age scores and their gains inspected by high, middle and low thirds (See Figure 3), the following results were found:

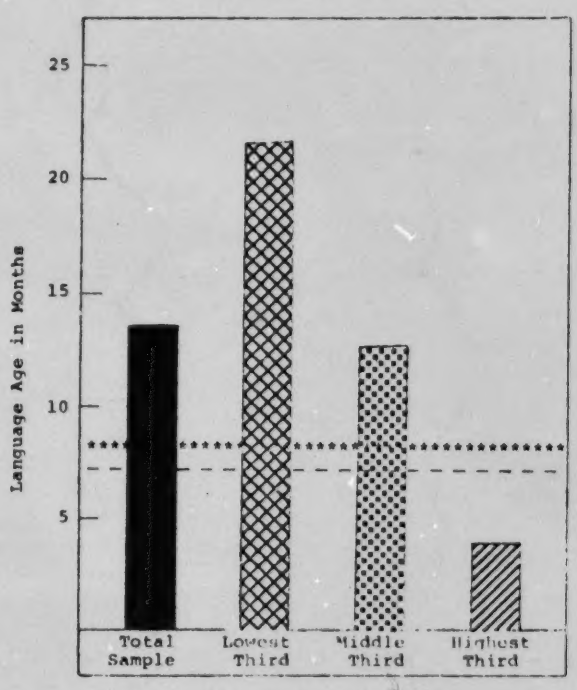
1. The lowest third of the pupils gained nearly 21.5 months during the 7 months between testings.

2. The middle third gained approximately 12.5 months.

3. The upper third gained only 3.75 months during the 7 month period.

Figure 3

GROWTH IN LANGUAGE AGE: First Project Year



– – Expected Growth Over 7 Months

*** Program Goal

In summary, there were great differences in the gains of the three groups.

The pupils with the lowest entering scores gained approximately three months of language age for each month in the program.

The pupils in the middle third gained nearly two months for each month in the program. Pupils with the highest scores gained the least -- less than four months of language age for the seven months in the program.

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The dramatic differences in rates of change for the three groups might, in part, have been a function of the test used, especially in the case of the highest third of the pupils for whom the test's ceiling was too low. It had originally been intended by the Learning Disabilities Specialist to use this subtest as an efficient way of screening learning disabled pupils. Because the project was interested in the growth of all children, as well as screening pupils for learning disabilities, and since this single subtest was not only limited in scope but had a low ceiling, it was decided to change the test for the second year of project operation. The Northwestern Syntax Scale, which yielded both expressive and receptive language scores, was substituted for the Sievers subtest.

Language: The Second Project Year

The Northwestern Syntax Scale was used during this program year as the measure of language age.

Receptive Language Age

When the scores of all Saturday School pupils who were both pre and posttested (N=648) were inspected, the following was observed about the scores of the pupils who met or exceeded the project goal:

- More than 68% (N=442) gained 11 months or more.
- About 3% (N=21) gained 10 months.
- About 2½% (N=16) gained 9 months.
- Approximately 2% (N=14) gained the 8 months expected for them during the 7 months between testings.

The following was observed about the test scores of pupils who failed to meet the project goal:

- About 2½% (N=16) gained 7 months during the 7 months between test administrations.
- Approximately 8½% (N=55) gained between 1 and 6 months.
- Around 13% (N=84) either showed no gain or regressed in the receptive language age scores.

Altogether, 76% (493 of the 648 pupils) met or exceeded the eight months of receptive language age during the seven months between testings.

When pupils were divided into lower, middle and upper thirds on the basis of their entering scores and their gains analyzed (see Figure 4), the following was found:

- The lowest third of the pupils gained nearly 23 months of receptive language age during the 7 months.
- The middle third of the pupils gained approximately 16½ months.
- The highest third gained approximately 11½ months.

In sum, there were large differences in gain scores between the three groups. The pupils with the lowest scores gained more than three months for each month in the program.

The middle group gained more than two months for each month in the program. The top group gained approximately 1½ months for each month between test administrations.

Expressive Language Age

When the scores of all Saturday School pupils (N=648) were inspected, the following was noted about pupils who had met or exceeded the project goal:

- Approximately 70% (N=445) gained 11 months or more.
- Around 2% (N=15) gained 10 months.
- About 3% (N=22) gained 9 months.
- Approximately 4% (N=24) gained the 8 months expected for them between test administrations.

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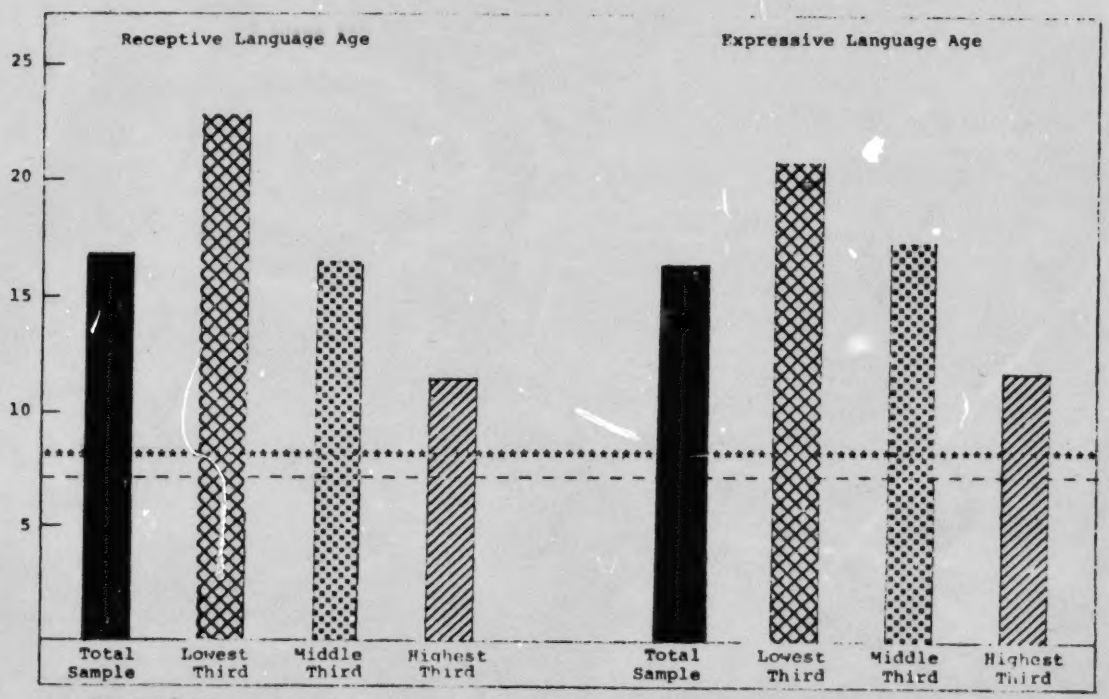
Figure 4

GROWTH IN LANGUAGE AGE: Second Project Year



– – Expected Growth over 7 Months
*** Program Goal

The following was observed about the scores of pupils who failed to meet the project goal:

- Only 1% (N=9) gained 7 months during the 7 months between testings.
- Approximately 9% (N=60) gained between 1 and 6 months.
- Around 11% (N=73) either showed no gain or regressed in the scores.

⇨ Altogether, 506 of the 648 pupils (78%) met or exceeded the expected 8 months of gain in expressive language age during the 7 months between test administrations.

When the pupils were divided into lowest, middle, and highest thirds, based on their entering scores and their gain scores inspected (refer to Figure 4), the following was found:

- The lowest third of the pupils gained approximately 21 months of expressive language age during the 7 months period.
- The middle third gained 17½ months.
- The highest third gained nearly 11 months.

In sum, there were considerable differences in average gain scores between the three groups.

⇨ The pupils with the lowest scores gained approximately three months for each month in the program.

The middle group gained 2 months for each month in the program. The top group gained a little more than 1½ months for each month between test administrations.

An Empirical Measure

During the second project year, it was found that the Northwestern Syntax Test, which purports to measure both receptive and expressive language, apparently measured only one factor. In addition, the test was too long for ease of administration. It was thus decided to change the measure used for language age. The Grammatic Closure Subtest of the Illinois Test of Psycholinguistic Ability (ITPA) was selected. This selection was based in part on a factor analytic study done by the Special Education Specialist on a random example of 40 Saturday School pupils who had been screened for learning disabilities, mental retardation, and emotional handicaps. His data indicated that the Grammatic Closure Subtest of the ITPA was the best predictor of auditory language and that auditory vocal language (which is measured by this subtest) was the most important factor in language success.

Language: The Third Project Year

The Grammatic Closure Subtest of the ITPA was used as the measure of language age during this program year. When the scores on all Saturday School students who had been both pre and posttested (N=692) were inspected, the following was observed about pupils who met or exceeded the 8-month criterion set for them:

(1) Approximately 6% (N=42) gained the expected 8 months.

(2) About 2½% (N=18) gained 9 months.

(3) Around 7% (N=49) gained 10 months.

(4) Nearly 45% (N=308) gained 11 months or more.

The following was noted about pupils who failed to meet the project criterion:

(1) Nearly 4% (N= 26) gained 7 months during the 7 months between test administrations.

(2) Approximately 23% (N=159) gained between 1 and 6 months.

(3) About 13% (N=90) either did not gain or regressed in their language scores.

In sum, 417 of the 692 pupils (60%) met or exceeded the expected 8 months of gain in language age during the 7 month period between testings.

When the pupils were divided into lowest, middle, and highest thirds (see Figure 5), based on their entering scores, it was found that:

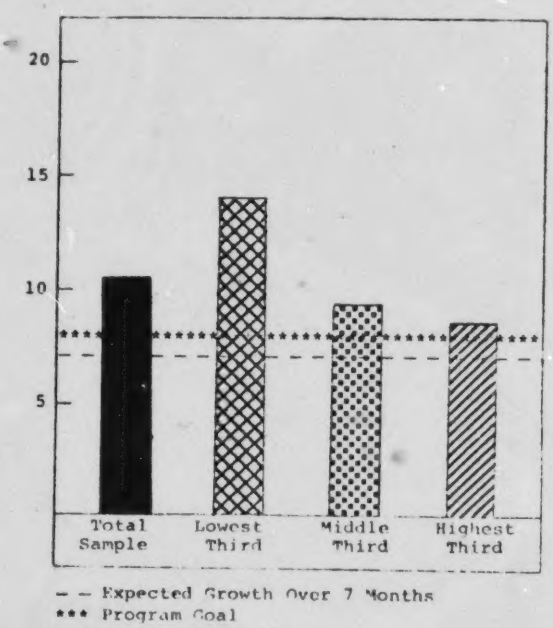
1. The lowest third of the pupils gained approximately 14 months.

2. The middle third gained about 9.25 months.

3. The highest third gained approximately 8.5 months.

Figure 5

GROWTH IN LANGUAGE AGE: Third Program Year



Obviously, there were differences in the average gains for the three groups.

The pupils with the lowest entering scores gained the most. They gained 2 months for each month in the program.

The pupils in the other two groups gained, on the average, 1.25 months for each month between test administrations.

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SUMMARY: COGNITIVE GROWTH
DURING THE PROGRAM YEAR

In order to assess the impact of the program on the cognitive growth of pupils, all Saturday School students were administered a battery of three tests at the beginning and end of each project year. The battery included measures of pupils' mental, perceptual, and language age. The three-year average, with seven months between testings, were:

In Mental Age:

- THE AVERAGE GAIN OF ALL STUDENTS was more than 15 months.
- MORE THAN 73% OF THE STUDENTS gained 11 months.
- DISADVANTAGED STUDENTS gained 16.5 months.

In Perceptual Age:

- THE AVERAGE GAIN OF ALL STUDENTS was more than 11 months.
- APPROXIMATELY ONE-HALF OF THE STUDENTS gained 11 or more months.
- DISADVANTAGED PUPILS gained about 16.5 months -- almost twice as much as other Saturday School pupils!

In Language Age:

Three different measures of language age were used during the three years of project operation.

- THE AVERAGE GAIN OF ALL STUDENTS ranged between 11 and 17 months, depending upon which test was used.
- BETWEEN 45% AND 70% OF THE STUDENTS gained 11 months or more in language age during the seven-month period.
- THOSE PUPILS WHO SCORED LOWEST in their initial language testing gained between 14 and 23 months.

Furthermore, the various analyses of the data from the three years of operation all conclusively demonstrate that the

vast majority of Saturday School students met or exceeded the criterion of an 8 months' gain in all three areas of mental, language, and perceptual age

during the seven months between test administrations.

The students who scored in the lowest third on entrance into the program consistently showed the greatest gains.

To the extent that the lowest third on a standardized measure of cognitive growth represents an "educationally disadvantaged" group, the project has helped these children overcome early learning deficits.

Further demonstration of the impact of the project on these disadvantaged pupils will be found in the following chapters, when follow-up of these pupils into kindergarten and first grade is discussed.

Obviously, one can conclude. . .

THE SATURDAY SCHOOL PROGRAM DOES HAVE AN IMPACT ON THE COGNITIVE GROWTH OF PARTICIPATING STUDENTS.

00027

cognitive growth in kindergarten and first grade

It is one thing to look at the short term outcomes of a program. Many programs may do that. What is less common, however, is following up students of a particular program to determine what, if any, long-range effects the program has had. There are, of course, a number of factors that discourage the follow-up of students who have been through a program --- two of the limiting conditions being that people do move away, and the process is costly in terms of both time and money.

THE FOLLOW-UP

Saturday School's evaluation plans were purposely designed to follow its students into kindergarten, first grade, and beyond to determine the program's long-range impact on children who had gone through it. Among questions this follow-up attempted to answer were: Do the gains hold up in subsequent formal schooling? Do Saturday School students do better than their controls who had no preschool experience? If Saturday School students do better, do they continue to do so over time? Does Saturday School do as good a job of preparing children for school as do the various other private, proprietary preschools in the district? How do the pupils with problems -- those belonging to the primary target group -- do when they enter the regular school program?

SELECTING A CONTROL GROUP

In seeking answers to questions about gains from the program, a natural question arises, "In comparison to whom?" What was needed was a comparison group similar in as many ways as possible, but which had not gone through the regular Saturday School program. This group could then be compared with the Saturday School pupils on relevant criteria.

The search for appropriate control groups has been a constant concern of the project. It has been impossible to select one control group which meets even minimal standards of rigor. Therefore, four control groups were used:

- Control Group I. Pupils with no preschool experience who had entered kindergarten in the district during the previous year.

- Control Group II. Pupils who entered kindergarten at the same time as Saturday School pupils but who had not attended any kind of pre-school.

- Control Group III. Pupils who had attended other private, proprietary preschools in the district.

- Control Group IV. Pupils from a nearby suburban school district judged to be similar to the Ferguson-Florissant School District.

There are obvious flaws in each of the above groups. For instance, Group I may or may not be similar to the group which entered the following year. Group II represented, to some degree, pupils whose parents chose not to send their child to the Saturday School Program. Not only the extent, but also the nature, of the bias is unknown. To a certain degree, the same can be said for Group III; we just do not know the characteristics of children whose parents choose to send them to private schools when a public-sponsored program is available.

These control groups, although used for comparative purposes and presented below, do not represent the ideal choice. They were simply the best available. Attempts have been made to obtain a sample of pupils from a nearby suburban district who entered kindergarten in the fall, 1974 (Control Group IV). Saturday School pupils who entered kindergarten at the same time will be compared to this new control group. (Results of these comparisons will be made available after the data are analyzed.)

Follow-up data from standardized tests are presented in the next two parts of this section. Children from the first and second program years have been followed through their kindergarten year, and sufficient time has elapsed to follow first program year students through first grade. During the 1974-75 school year, data will be collected on second grade pupils as part of this ongoing attempt to follow up Saturday School students.

THE KINDERGARTEN YEAR

All first and second year Saturday School students who entered kindergarten in the District were tested, using the Screening Test of Academic Readiness (STAR) upon entry. The STAR battery yields eight subtest scores, plus a Total score based on the 81 items of the test.

RESULTS I: Saturday School Pupils Vs. Control Group I

The results of the analyses contrasting Saturday School students to pupils who had no preschool experience and who entered the district's kindergarten classes one year prior to the Saturday School students (Control Group I) are presented in Table 2.

It may be seen in Table 2 that:

- Pupils from the first program year had higher mean scores on five of the eight subtests and total score of the STAR than did their controls.

- Pupils from the second program year were found to:

  ⇨ exceed their controls on all eight of the subtests as well as on the total scores.

The criterion set for these groups specified that in addition to statistically significant results, there would be at least an eighth of a standard deviation difference between the means of the Saturday School and the Control I groups. This criterion was met in all instances where statistically significant results were obtained. It was not met in the three instances where non-significant results were obtained.

Table 2

SUMMARY OF RESULTS ON THE SCREENING TEST OF ACADEMIC READINESS COMPARING SATURDAY SCHOOL STUDENTS UPON ENTRY INTO KINDERGARTEN TO CONTROL GROUP PUPILS ENTERING KINDERGARTEN ONE YEAR EARLIER

STAR	Project Year	Group	N	Mean[a]	Standard Deviation	F	p
Picture Vocabulary	First	S.S.	681	9.12	2.12	6.43	<.025
		Control I	911	9.43	2.24		
	Second	S.S.	602	10.12	2.04	58.68	<.005
		Control I	302	8.94	2.43		
Letters	First	S.S.	681	6.42	2.49	33.12	<.005
		Control I	911	5.61	2.88		
	Second	S.S.	602	6.56	2.41	64.00	<.005
		Control I	302	5.08	2.99		
Picture Completion	First	S.S.	681	4.57	1.67	1.34	n.s.
		Control I	911	4.48	1.60		
	Second	S.S.	602	4.73	1.52	15.68	<.005
		Control I	302	4.29	1.67		
Copying	First	S.S.	681	2.92	1.34	1.34	n.s.
		Control I	911	3.00	1.31		
	Second	S.S.	602	3.19	1.16	21.62	<.005
		Control I	302	2.79	1.32		
Picture Description	First	S.S.	681	6.18	1.76	16.06	<.005
		Control I	911	5.82	1.81		
	Second	S.S.	602	6.30	1.76	40.70	<.005
		Control I	302	5.49	1.79		
Human Figure Drawing	First	S.S.	681	9.81	3.13	2.84	n.s.
		Control I	911	9.53	3.32		
	Second	S.S.	602	10.27	3.31	52.56	<.005
		Control I	302	8.53	3.44		
Relationships	First	S.S.	681	6.73	1.39	19.45	<.005
		Control I	911	6.40	1.87		
	Second	S.S.	602	6.85	1.29	36.97	<.005
		Control I	302	6.26	1.54		
Numbers	First	S.S.	681	8.69	3.71	13.56	<.005
		Control I	911	7.95	4.11		
	Second	S.S.	602	9.32	3.61	72.42	<.005
		Control I	302	7.04	4.12		
Total	First	S.S.	681	54.98	11.40	19.00	<.005
		Control I	911	52.26	12.93		
	Second	S.S.	602	57.22	10.89	112.36	<.005
		Control I	302	48.23	13.68		

[a] *Scores are expressed in raw score units.*

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In summary, pupils who participated in the first Saturday School project year tended to score higher in such areas of cognitive attainment as Picture Vocabulary, Letters, Picture Description, Relationships, and Numbers than did comparable pupils who had not participated in any preschool program.

⇨ Second year Saturday School students tended to score higher in ALL areas of academic readiness than did controls from the preceding year.

RESULTS II: Saturday School Pupils Vs. Control II and Control III

Additional comparisons were made with the STAR data. All first and second year Saturday School students were compared with pupils who either

a) Attended other kinds of preschool (Control Group III) or

b) Had no preschool experience of any kind (Control Group II).

Both groups had entered kindergarten in the district during the same year as the Saturday School groups. The results of these comparisons are given in Table 3.

It can be seen that:

- Saturday School pupils from the first project year exceeded Control II pupils on all subtests but one (Copying) as well as on Total scores.
- Saturday School pupils from the second project year scored higher, on the average, than their Control II comparison group on every subtest, as well as on the Total test.
- Both groups of pupils who had other preschool (Control III) experience also scored higher than the Control II groups on all subtests but one (Relationships, for the second year only).

Table 3

RESULTS OF ANALYSES OF VARIANCE AND DUNCAN'S MULTIPLE RANGE TESTS WITH EXTENSION FOR UNEQUAL REPLICATIONS FOR ENTERING KINDERGARTENERS IN 1972 AND 1973 ON THE SCREENING TEST OF ACADEMIC READINESS

Variable	Project Year	Group*	N	Mean and Duncan's Results	Standard Deviation	F	p
STAR							
I Picture Vocabulary	First	S.S.	681	9.72	2.13		
		C III	200	9.78 b,d	2.46	13.63	<.005
		C II	302	8.94	2.43		
	Second	S.S.	602	10.12	2.04		
		C III	182	10.23 b,d	2.04	13.90	<.005
		C II	184	9.24	2.39		
II Letters	First	S.S.	681	6.41	2.49		
		C III	200	6.34 b,d	2.56	27.87	<.005
		C II	302	5.08	2.99		
	Second	S.S.	602	6.56	2.41		
		C III	182	6.68 b,d	2.54	40.52	<.005
		C II	184	4.76	2.69		
III Picture Completion	First	S.S.	681	4.57	1.60		
		C III	200	4.61 b,d	1.68	3.69	<.05
		C II	302	4.39	1.67		
	Second	S.S.	602	4.73	1.52		
		C III	182	4.79 b,d	1.78	14.61	<.005
		C II	184	4.03	1.78		
IV Copying	First	S.S.	681	2.91	1.34		
		C III	200	3.02	1.44	1.85	n.s.
		C II	302	2.79	1.32		
	Second	S.S.	602	3.19	1.16		
		C III	182	3.19 b,d	1.50	5.64	<.025
		C II	184	2.84	1.36		
V Picture Description	First	S.S.	681	6.18	1.76		
		C III	200	5.83 b,d	1.87	16.34	<.005
		C II	302	5.49	1.79		
	Second	S.S.	602	6.30	1.76		
		C III	182	6.19 b,d	1.83	15.35	<.005
		C II	184	5.48	1.72		
VI Human Figure Drawing	First	S.S.	681	9.81	3.13		
		C III	200	9.22 a,b,d	3.42	16.29	<.005
		C II	302	8.53	3.44		
	Second	S.S.	602	10.27	3.31		
		C III	182	9.71 a,b,d	3.26	21.60	<.005
		C II	184	8.44	3.34		
VII Relationships	First	S.S.	681	6.73	1.39		
		C III	200	6.48 a,b	1.72	10.89	<.005
		C II	302	6.26	1.54		
	Second	S.S.	602	6.85	1.29		
		C III	182	6.67 b,d	1.84	15.92	<.005
		C II	184	6.15	1.66		
VIII Numbers	First	S.S.	681	8.69	3.71		
		C III	200	8.78 b,d	4.05	28.78	<.005
		C II	302	7.04	4.12		
	Second	S.S.	602	9.32	3.61		
		C III	182	9.54 b,d	3.85	41.26	<.005
		C II	184	6.62	3.84		
Total	First	S.S.	681	54.98	11.40		
		C III	200	53.97 a,b,d	13.49	31.68	<.005
		C II	302	48.23	13.68		
	Second	S.S.	602	57.22	10.89		
		C III	182	56.48 b,d	12.90	48.73	<.005
		C II	184	47.64	12.83		

**Results of the Duncan's Multiple Range Tests are given using the following codes:*

a = the Saturday School mean was statistically significantly higher than the preschool group mean.
b = the Saturday School mean was statistically significantly higher higher than the control group mean.
c = the Preschool mean was statistically significantly higher than the Saturday School group mean.
d = the Preschool mean was statistically significantly higher than the control group mean.
e = the Control group mean was statistically significantly higher than the Saturday School group mean.
f = the Control group mean was statistically significantly higher than the preschool group mean.

C = Control

00033

. Finally, Saturday School pupils from both years scored higher than the other preschool (Control III) groups on the Human Figure Drawing Test, while Saturday School pupils from the first project year exceeded the other preschool group (Control III) on the Relationships subtest and on the Total battery.

In summary, pupils with preschool experience, whether from the Saturday School Program or other sources, tended to score higher than pupils with no preschool experience of any kind who entered kindergarten during the same year. In four instances, Saturday School pupils exceeded the average scores obtained by pupils who had other kinds of preschool experience.

RESULTS III: The Handicapped

In following up the second year Saturday School students upon entry into kindergarten, analyses of STAR results were made comparing those students who had been identified as having problems (the primary target group) with

a) Saturday School pupils who were identified as not being handicapped, and

b) Control group pupils who had no preschool experience of any kind and who, as a group, did not have learning problems (Control Group II).

The results of these comparisons are presented in Table 4.

Table 4

COMPARISONS BETWEEN SATURDAY SCHOOL STUDENTS IDENTIFIED AS HANDICAPPED (N=255);
SATURDAY SCHOOL STUDENTS NOT IDENTIFIED AS HANDICAPPED (N=347);
AND PUPILS WITH NO PRESCHOOL EXPERIENCE OF ANY KIND (N=184)
UPON ENTRY INTO KINDERGARTEN IN FALL 1973
ON THE SCREENING TEST OF ACADEMIC READINESS

Variable	Group	Mean	Standard Deviation	F
STAR I Picture Vocabulary	S.S. - NH	10.40	1.95	14.54 < .005
	S.S. - H	9.75	2.11	5.67 < .025
	Control II	9.24	2.39	
II Letters	S.S. - NH	6.82	2.34	8.95 < .005
	S.S. - H	6.22	2.47	35.10 < .005
	Control II	4.75	2.69	
III Picture Completion	S.S. - NH	4.89	1.44	8.93 < .005
	S.S. - H	4.51	1.61	9.09 < .005
	Control II	4.03	1.78	
IV Copying	S.S. - NH	3.28	1.09	4.49 < .05
	S.S. - H	3.07	1.25	3.43 n.s.
	Control II	2.84	1.36	
V Picture Description	S.S. - NH	6.57	1.70	19.57 < .005
	S.S. - H	5.93	1.77	7.21 < .01
	Control II	5.48	1.72	
VI Human Figure Drawing	S.S. - NH	10.49	3.17	3.68 n.s.
	S.S. - H	9.96	3.47	21.25 < .005
	Control II	8.44	3.34	
VII Relationships	S.S. - NH	7.02	1.17	14.99 < .005
	S.S. - H	6.62	1.41	10.18 < .005
	Control II	6.15	1.66	
VIII Numbers	S.S. - NH	9.84	3.37	17.41 < .005
	S.S. - H	8.61	3.82	28.83 < .005
	Control II	6.62	3.84	
TOTAL	S.S. - NH	59.12	9.73	25.95 < .005
	S.S. - H	54.64	11.83	34.89 < .005
	Control II	47.64	12.83	

NH = Non Handicapped
H = Handicapped

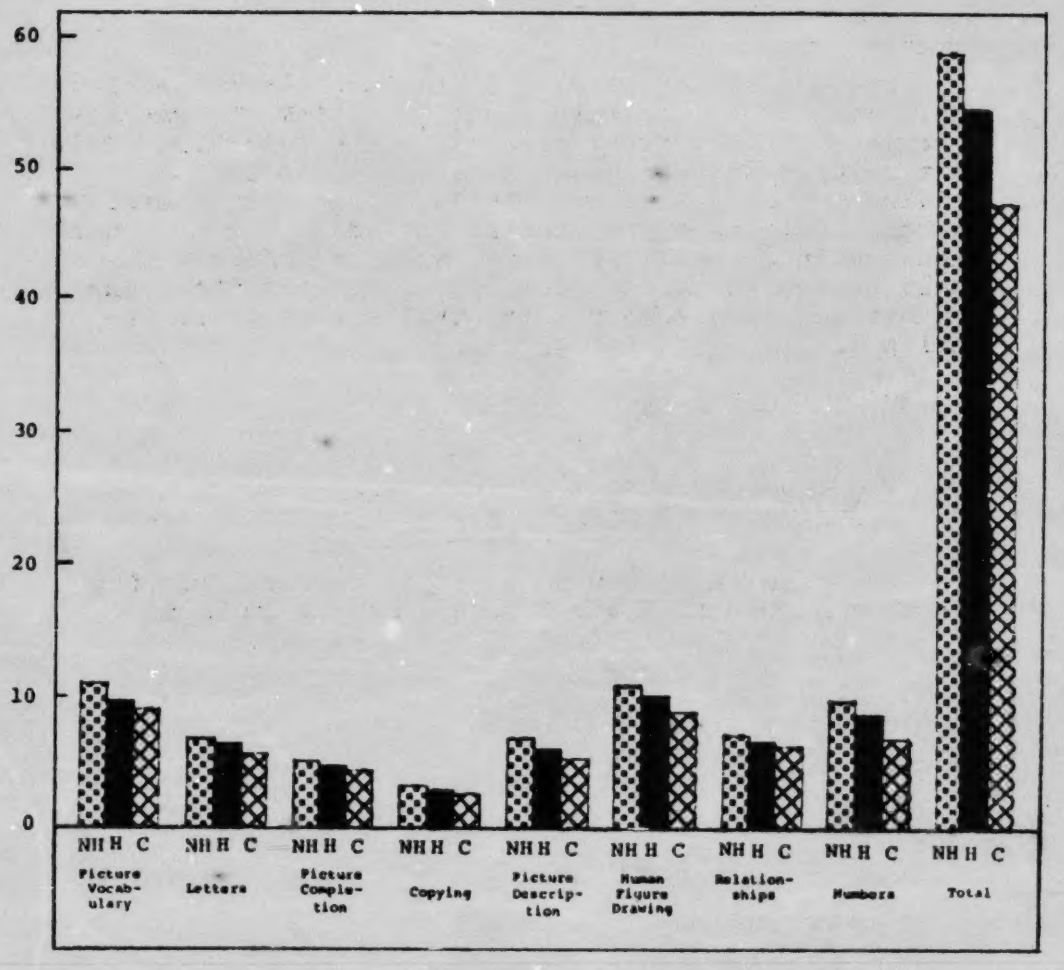
00035

It may be seen that non-handicapped Saturday School pupils attained higher average scores on all subtests but one (Human Figure Drawing) as well as on the Total test when compared to the handicapped Saturday School pupils. At the same time,

⇨ handicapped pupils who had the benefit of the Saturday School program had higher average scores on every subtest but one (Copying), as well as on the Total test, than did Control Group II pupils with no problems. (See Figure 6.)

Figure 6

HANDICAPPED SATURDAY SCHOOL STUDENTS
Compared to
Non-Handicapped Saturday School Students
and
Control Students from the Same District



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Apparently it was not possible for the primary target group to catch up completely with non-handicapped pupils who had participated in the Saturday School Program, but, given the experience in the program,

former students with problems did catch, and surpass, non-handicapped pupils with no preschool experience.

THE FIRST GRADE

In the fall of 1973, the Stanford Early School Achievement Test, Primary Level II (SESAT II) was administered to all first graders in the District. This particular test was chosen because of the lack of ceiling on Level I of the SESAT. (The SESAT, Level II battery contains six subtests, including two that deal with reading. While all first grade children were administered the first four subtests, only those pupils who had acquired some reading skills were given the entire test.)

RESULTS I: Saturday School Pupils Vs. Control Group II

The results of the comparisons between Saturday School and Control Group II are given in Table 5.

Table 5

SUMMARY OF RESULTS COMPARING SATURDAY SCHOOL STUDENTS UPON ENTRY INTO FIRST GRADE TO CONTROL GROUP PUPILS ENTERING FIRST GRADE AT THE SAME TIME ON THE STANFORD EARLY SCHOOL ACHIEVEMENT TEST, LEVEL II

SESAT, II	Group	N*	Mean**	Standard Deviation	F	p
Environment	S.S.	482	27.20	4.37	20.88	<.005
	Control II	267	25.60	4.86		
Math	S.S.	482	38.83	9.28	22.09	<.005
	Control II	267	35.40	9.92		
Letters and Sounds	S.S.	482	35.44	5.43	14.06	<.005
	Control II	267	33.79	6.47		
Aural Comprehension	S.S.	482	19.00	3.32	19.54	<.005
	Control II	267	17.85	3.72		
Word Reading	S.S.	389	40.99	11.54	6.00	<.025
	Control II	202	37.12	11.97		
Sentence Reading	S.S.	307	17.99	10.07	14.36	<.005
	Control II	156	15.69	8.58		
Total of First Four Subtests	S.S.	482	120.32	18.50	26.73	<.005
	Control II	267	112.67	20.80		

*Only those pupils who had acquired some reading skills took the last two subtests.

**Scores are represented in raw score units.

Statistically significant differences were found between the groups on all six subtests as well as on the Total scores generated by summing the first four subtests. The criterion set for these groups was a one-sixth standard deviation difference between means in favor of the Saturday School pupils. This criterion was exceeded in all instances. Specifically, it was found that

Saturday School pupils scored higher, on the average, in the areas of Environment, Math, Letters and Sounds, Aural Comprehension and Word and Sentence Reading.

In addition, their total scores, based on the first four areas, was higher than that of pupils who had not experienced preschool.

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RESULTS II: Saturday School Pupils Vs. Control Group II and Control Group III

Supplementary analyses were carried out comparing all first year Saturday School students with pupils who had other kinds of preschool experience (Control Group III), as well as with control pupils who had had no preschool experience of any kind (Control Group II). All of these pupils entered first grade in the fall, 1973. The results of these comparisons are given in Table 6.

It may be seen that both Saturday School pupils and pupils with other kinds of preschool experience (Control Group III) had higher average scores than did Control Group II pupils on the first four subtests as well as on the Total scores. Only the Saturday School group scored higher than the Control Group II on the Word Reading Subtest.

No statistically significant differences were obtained on the Sentence Reading Subtest. There were no statistically significant differences between the Saturday School group and Control Group III on any area of academic achievement, as measured by the SESAT, II.

RESULTS III: The Handicapped

Saturday School students who had been identified as belonging to the primary target group (handicapped) were compared on the SESAT, II to

a) Saturday School pupils identified as not being handicapped and

b) Control Group II pupils with no formal preschool experience.

The results of these comparisons may be found in Table 7.

Table 6

RESULTS OF ANALYSES OF VARIANCE AND DUNCAN'S MULTIPLE RANGE TESTS
WITH EXTENSION FOR UNEQUAL REPLICATIONS
FOR ENTERING FIRST GRADE PUPILS (1973)
ON THE STANFORD EARLY SCHOOL ACHIEVEMENT TEST, LEVEL II

SESAT II	F	Group*	N	Mean and Duncan's** Results	Standard Deviation
I Environment	11.41 < .005	S.S.	482	27.20	4.37
		C III	192	27.18 b,d	4.90
		C II	267	25.60	4.86
II Math	13.10 < .005	S.S.	482	38.83	9.28
		C III	192	39.10 b,d	9.44
		C II	267	35.40	9.92
III Letters & Sounds	7.12 < .01	S.S.	482	35.44	5.43
		C III	192	35.24 b,d	5.95
		C II	267	33.79	6.47
IV Aural Comprehension	11.27 < .005	S.S.	482	19.00	3.32
		C III	192	19.14 b,d	3.45
		C II	267	17.85	3.72
V Word Reading	7.42 < .01	S.S.	389	40.99	11.54
		C III	163	39.06 b	11.84
		C II	202	37.12	11.97
VI Sentence Reading	3.11 n.s.	S.S.	307	17.99	10.07
		C III	130	16.69	9.30
		C II	156	15.69	8.58
Total of First Four Subtests	15.19 < .005	S.S.	482	120.32	18.50
		C III	192	120.66 b,d	19.85
		C II	267	112.67	20.80

**Entering first graders were identified as belonging to one of three groups:*
S.S. = pupils who had participated in the first project year;
P-S = pupils with other preschool experience; and
Control = pupils with no preschool experience of any kind.

***Results of the Duncan's Multiple Range Tests are given in the following codes:*
a = the Saturday School mean was statistically significantly higher than the preschool group mean.
b = the Saturday School mean was statistically significantly higher than the control group mean.
c = the Preschool mean was statistically significantly higher than the Saturday School group mean.
d = the Preschool mean was statistically significantly higher than the control group mean.
e = the Control group mean was statistically significantly higher than the Saturday School group mean.
f = the Control group mean was statistically significantly higher than the preschool group mean.

C = Control

00040

Table 7

RESULTS OF COMPARISONS BETWEEN SATURDAY SCHOOL STUDENTS IDENTIFIED AS HANDICAPPED, SATURDAY SCHOOL STUDENTS IDENTIFIED AS NOT HANDICAPPED, AND PUPILS WITH NO PRESCHOOL EXPERIENCE OF ANY KIND AT THE TIME OF ENTRY INTO FIRST GRADE IN FALL, 1973 ON THE STANFORD EARLY SCHOOL ACHIEVEMENT TEST, LEVEL II

SESAT, II	Group	N	Mean	Standard Deviation	F
I Environment	S.S. - NH	239	27.62	4.21	4.45 < .05
	S.S. - H	243	26.78	4.49	8.14 < .005
	Control II	267	25.60	4.86	
II Math	S.S. - NH	239	40.33	8.87	12.82 < .005
	S.S. - H	243	37.35	9.44	5.12 < .025
	Control II	267	35.40	9.92	
III Letters & Sounds	S.S. - NH	239	36.49	4.87	18.59 < .005
	S.S. - H	243	34.40	5.75	1.23 n.s.
	Control II	267	33.79	6.47	
IV Aural Comprehension	S.S. - NH	239	19.38	3.27	6.44 < .025
	S.S. - H	243	18.62	3.34	3.96 < .025
	Control II	267	17.85	3.72	
V Word Reading	S.S. - NH	203	42.66	10.84	9.02 < .005
	S.S. - H	186	39.17	12.03	2.83 n.s.
	Control II	202	37.11	11.97	
VI Sentence Reading	S.S. - NH	158	19.35	10.29	6.05 < .025
	S.S. - H	149	16.55	9.65	< 1 n.s.
	Control II	156	15.69	8.58	
Total of First Four Subtests	S.S. - NH	239	123.55	18.14	14.94 < .005
	S.S. - H	243	117.13	18.33	6.56 < .025
	Control II	267	112.67	20.80	

NH = Non-Handicapped
H = Handicapped

00041

It can be seen that Saturday School pupils identified as being without handicaps scored higher, on the average, than did Saturday School target group pupils. This was true of all six subtests as well as of the Total score. When the primary target group was compared to Control Group II, however, something else was noted. It was found that the handicapped Saturday School pupils scored higher, on the average, than the Controls. This was noted on three of the first four subtests of the SESAT, II as well as on the Total score. There were no statistically significant differences between the two groups on the Letters and Sounds, Word Reading, or Sentence Reading subtests.

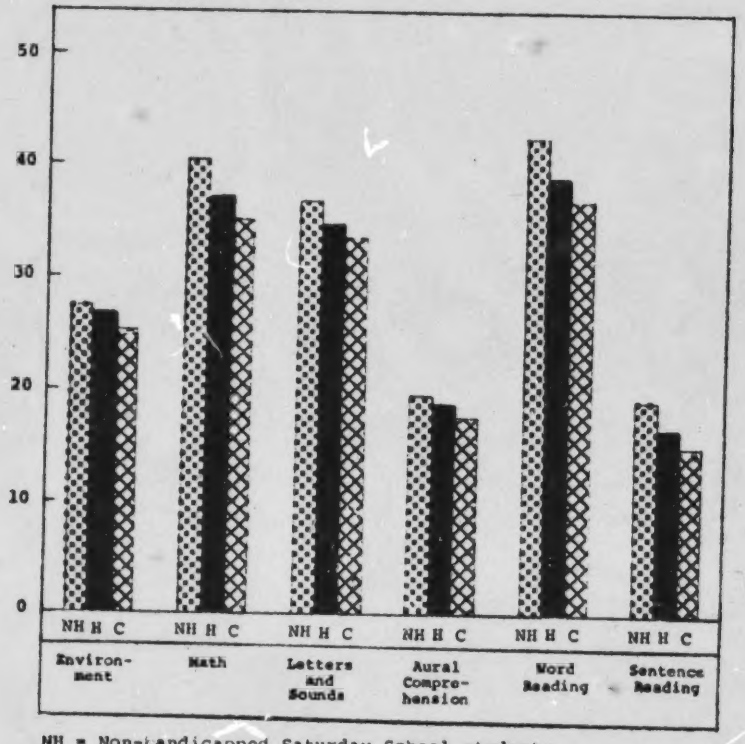
⇨ In no case did control group pupils exceed primary target group pupils in any area of academic achievement as measured by the SESAT, II.

Although first year primary target group pupils did not equal their non-handicapped counterparts who participated in the Saturday School Program,

⇨ former students with problems did exceed, in most areas of academic achievement, non-handicapped pupils without preschool experience. (See Figure 7.)

Figure 7

HANDICAPPED SATURDAY SCHOOL STUDENTS
Compared to
Non-Handicapped Saturday School Students
and
Control Group Students



NH = Non-Handicapped Saturday School students
H = Handicapped Saturday School students
C = Control Group students

00043

SUMMARY: COGNITIVE GROWTH
DURING KINDERGARTEN AND FIRST GRADE

In order to determine the long-term impact of the project on the cognitive growth of students, tests of academic readiness and achievement were administered to pupils when they entered both kindergarten and first grade. Saturday School students were compared to a variety of control groups. The results of these comparisons showed that:

In Kindergarten:

- FIRST YEAR STUDENTS EXCEEDED THEIR CONTROLS from the previous year on five of the eight subtests as well as on the Total score on an academic readiness test.
- SECOND YEAR STUDENTS EXCEEDED THEIR CONTROLS from the previous year on all eight subtests, plus the Total score.
- HANDICAPPED SATURDAY SCHOOL PUPILS EXCEEDED a control group of non-handicapped pupils without preschool experience on seven of eight subtests, plus the Total score in academic readiness.

In First Grade:

- FIRST YEAR STUDENTS EXCEEDED their controls from the same year on all six subtests, as well as the Total score on an achievement test.
- HANDICAPPED SATURDAY SCHOOL STUDENTS SCORED HIGHER than their non-handicapped controls on three of the six subtests as well as on the Total score. In no instance did the Controls exceed the handicapped pupils.

Apparently, the impact of Saturday School extends beyond the year of program participation: THOSE PUPILS WHO PARTICIPATED IN THE SATURDAY SCHOOL PROGRAM CONSISTENTLY DID BETTER THAN PUPILS WHO DID NOT PARTICIPATE.

Of particular note was THE ACHIEVEMENT OF HANDICAPPED SATURDAY SCHOOL STUDENTS: They were not quite able to match the performance of non-handicapped pupils who had some kind of preschool experience, BUT THEY DID CONSISTENTLY SCORE HIGHER THAN "NORMAL" PUPILS WITHOUT PRESCHOOL EXPERIENCES.

00044

other aspects of student growth

In addition to cognitive development, the program also focused on the following aspects of student growth:

- personal-social development
- motor skill development
- language and concept development
- attitudes toward school
- self-esteem

Both parents and teachers were used as sources of ratings in these areas. A description of the forms used and summary of the ratings obtained from parents and teachers are presented in the following two chapters.

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other aspects of student growth as perceived by their parents

HOW PARENTS PERCEIVED THEIR CHILD'S DEVELOPMENT FROM ENTRY INTO SATURDAY SCHOOL TO ENTRY INTO KINDERGARTEN

All Saturday School pupils were rated by their parents prior to the beginning of each project year, using a 47-item behavior checklist entitled "Introducing My Preschool Child." They were rated by the parents again, prior to entry into kindergarten, using a similar 47-item checklist entitled, "Introducing My Kindergarten Child." There were 28 three-point rating scales common to both checklists. Ratings on two samples of Saturday School students were available: those who had participated in the first year of project operation and those who had participated in the second year.

HOW PUPILS CHANGED BETWEEN ENTRY INTO THE PROGRAM AND ENTRY INTO KINDERGARTEN

A summary which compares parents' ratings of student prior to entry into the Saturday School Program with those obtained prior to entry into kindergarten for both project years is given in Table 8. Differences between means were evaluated using paired observations tests. Proportions of pupils judged to be "deficient" at the beginning and end of each year are also given. (Deficiency was defined as a rating of "1" or "0" on each three-point scale.)

Table 8

A SUMMARY OF INITIAL AND FINAL PARENT RATINGS ON THEIR CHILDREN'S STATUS IN THE AREAS OF PERSONAL AND SOCIAL DEVELOPMENT, LANGUAGE AND CONCEPT DEVELOPMENT, AND MOTOR SKILL DEVELOPMENT

Scales	Project Year	N		Mean	Standard Deviation	t	p	Deficient N	Deficient %
PERSONAL AND SOCIAL DEVELOPMENT									
1. Child snaps, buttons, and zips clothing	First	591	Initial	1.46	.59	14.52	<.01	295	50
			Final	1.81	.40			104	18
	Second	441	Initial	1.48	.57	12.45	<.01	212	48
			Final	1.81	.43			76	17
2. Child goes to toilet by himself	First	593	Initial	1.93	.41	2.10	<.05	43	7
			Final	1.97	.18			17	3
	Second	441	Initial	1.93	.26	3.22	<.01	29	7
			Final	1.97	.16			6	1
3. Child takes good care of things he uses	First	590	Initial	1.43	.58	7.97	<.01	320	53
			Final	1.61	.49			226	37
	Second	441	Initial	1.41	.57	7.83	<.01	244	55
			Final	1.62	.49			166	38
4. Child pays attention and concentrates well	First	588	Initial	1.32	.53	4.14	<.01	382	65
			Final	1.42	.51			335	57
	Second	441	Initial	1.38	.51	3.81	<.01	269	61
			Final	1.48	.52			224	51
5. Child follows simple directions without reminding	First	592	Initial	1.40	.57	3.89	<.01	352	59
			Final	1.50	.51			291	49
	Second	441	Initial	1.39	.52	4.74	<.01	202	46
			Final	1.54	.51			202	46
6. Child tells what he wants or needs	First	593	Initial	1.94	.36	-1.41	n.s.	40	7
			Final	1.92	.28			50	8
	Second	441	Initial	1.91	.31	<1	n.s.	38	9
			Final	1.92	.28			37	8
7. Child takes turns and shares	First	593	Initial	1.47	.56	5.74	<.01	318	54
			Final	1.61	.50			231	39
	Second	441	Initial	1.45	.51	5.51	<.01	238	54
			Final	1.61	.49			170	39
8. Child remembers rules of games he plays	First	587	Initial	1.25	.62	11.42	<.01	388	66
			Final	1.55	.54			253	43
	Second	441	Initial	1.26	.62	11.67	<.01	281	64
			Final	1.63	.50			161	37
9. Child helps with simple household jobs	First	592	Initial	1.51	.55	1.98	<.05	276	47
			Final	1.56	.51			254	43
	Second	440	Initial	1.48	.52	2.57	<.05	223	51
			Final	1.56	.52			189	43

*All scales were scored as follows: 2 = regularly; 1 = sometimes; and 0 = not yet. Deficiency was defined as a score of 1 or 2.

Table 8 (continued)

A SUMMARY OF INITIAL AND FINAL PARENT RATINGS ON THEIR CHILDREN'S STATUS IN THE AREAS OF PERSONAL AND SOCIAL DEVELOPMENT, LANGUAGE AND CONCEPT DEVELOPMENT, AND MOTOR SKILL DEVELOPMENT

Scale*	Project Year	N		Mean	Standard Deviation	t	p	Deficient N	Deficient %
LANGUAGE AND CONCEPT DEVELOPMENT									
1. Child speaks in sentences of five or more words	First	593	Initial	1.91	.32	4.61	<.01	50	8
			Final	1.96	.20			21	4
	Second	441	Initial	1.95	.25	2.41	<.05	22	5
			Final	1.98	.15			10	2
2. Child identifies six or more colors	First	588	Initial	1.57	.72	13.20	<.01	172	29
			Final	1.94	.29			30	5
	Second	442	Initial	1.55	.72	5.57	<.01	140	32
			Final	1.76	.46			100	23
3. Child recites rhymes, sings songs	First	589	Initial	1.49	.65	9.22	<.01	257	44
			Final	1.70	.50			163	28
	Second	442	Initial	1.48	.61	14.89	<.01	203	46
			Final	1.94	.29			23	5
4. Child tells how things are alike or different	First	589	Initial	1.44	.63	11.55	<.01	293	50
			Final	1.74	.46			152	26
	Second	441	Initial	1.50	.59	8.99	<.01	200	45
			Final	1.77	.43			100	23
5. Child identifies a few letters of the alphabet	First	572	Initial	1.28	.81	16.71	<.01	287	50
			Final	1.79	.48			101	18
	Second	441	Initial	1.40	.74	13.96	<.01	197	45
			Final	1.84	.41			62	14
6. Child identifies many letters of the alphabet	First	580	Initial	.85	.91	17.14	<.01	381	66
			Final	1.45	.81			200	34
	Second	440	Initial	.89	.88	16.17	<.01	293	67
			Final	1.55	.75			131	30
7. Child prints his first name correctly	First	589	Initial	.62	.84	27.24	<.01	457	78
			Final	1.63	.63			169	29
	Second	441	Initial	.69	.86	24.32	<.01	325	74
			Final	1.75	.51			97	22
8. Child tells his whole name	First	586	Initial	1.70	.60	10.52	<.01	138	24
			Final	1.96	.23			20	3
	Second	441	Initial	1.70	.61	8.24	<.01	96	22
			Final	1.95	.23			24	5
9. Child tells his address	First	576	Initial	.77	.81	19.45	<.01	448	78
			Final	1.47	.72			231	40
	Second	441	Initial	.76	.82	15.22	<.01	334	76
			Final	1.40	.74			196	44
10. Child tells his telephone number	First	575	Initial	.32	.66	20.09	<.01	521	91
			Final	1.10	.89			316	55
	Second	440	Initial	.37	.69	16.10	<.01	386	88
			Final	1.07	.90			245	56
11. Child counts from 1 to 10 or beyond	First	590	Initial	1.66	.65	10.48	<.01	144	24
			Final	1.93	.29			32	5
	Second	441	Initial	1.68	.60	10.47	<.01	110	25
			Final	1.98	.15			7	2

**All scales were scored as follows: 2 = regularly; 1 = sometimes; and 0 = not yet. Deficiency was defined as a score of 1 or 2.*

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Table 8 (continued)

A SUMMARY OF INITIAL AND FINAL PARENT RATINGS ON THEIR CHILDREN'S STATUS IN THE AREAS OF PERSONAL AND SOCIAL DEVELOPMENT, LANGUAGE AND CONCEPT DEVELOPMENT, AND MOTOR SKILL DEVELOPMENT

Scale*	Project Year	N		Mean	Standard Deviation	t	p	Deficient N	Deficient %
MOTOR SKILL DEVELOPMENT									
1. Child can ride a tricycle or bicycle	First	590	Initial	1.98	.18	<1	n.s.	11	2
			Final	1.97	.21			12	2
	Second	441	Initial	1.95	.23	2.30	<.05	18	4
			Final	1.98	.18			6	1
2. Child runs, hops and jumps	First	591	Initial	1.96	.19	1.15	n.s.	22	4
			Final	1.97	.17			14	2
	Second	441	Initial	1.95	.23	3.59	<.01	22	5
			Final	1.99	.12			6	1
3. Child claps or marches in time to music	First	589	Initial	1.59	.58	6.17	<.01	214	36
			Final	1.74	.48			140	24
	Second	441	Initial	1.63	.56	4.42	<.01	143	32
			Final	1.76	.46			100	23
4. Child uses scissors with control	First	588	Initial	1.16	.73	16.41	<.01	384	65
			Final	1.64	.53			198	34
	Second	441	Initial	1.16	.74	14.22	<.01	279	63
			Final	1.65	.54			140	32
INTERESTS AND EXPERIENCES									
1. Child is read to	First	585	Initial	1.56	.53	<1	n.s.	247	42
			Final	1.56	.52			254	43
	Second	437	Initial	1.61	.51	-1.45	n.s.	167	38
			Final	1.57	.53			180	41
2. Child goes to library	First	587	Initial	1.07	.84	-2.19	<.05	357	61
			Final	1.01	.74			427	73
	Second	438	Initial	1.08	.81	-2.82	<.01	275	63
			Final	.98	.73			324	74
3. Child watches Sesame Street	First	586	Initial	1.47	.63	2.38	<.05	271	46
			Final	1.53	.58			249	42
	Second	438	Initial	1.50	.63	3.99	<.01	189	43
			Final	1.62	.54			155	35
4. Child takes trips outside the community	First	586	Initial	1.60	.54	-2.20	<.05	221	38
			Final	1.54	.55			254	43
	Second	438	Initial	1.54	.59	-1.45	n.s.	177	40
			Final	1.50	.56			206	47

**All scales were scored as follows: 2 = regularly; 1 = sometimes; and 0 = not yet. Deficiency was defined as a score of 1 or 2.*

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It can be seen in Table 8 that parents rated their children significantly higher in the areas of personal and social development, as well as in motor skill and language and concept development, at the time of entry into kindergarten than they had prior to entry into Saturday School. The above statement can be inferred from both the statistically significant t-test results, and the differences in the proportions of pupils found to be deficient in the items at the two different times of rating.

Altogether, of the 28 rating scales compared, there were 19 statistically significant t-test results using first project year pupils and 22 significant t-test results using second project year pupils. The results indicated higher parental ratings in skill development and behavior at the time of entry into kindergarten than one year earlier. Of the 28 comparisons, seven were not statistically significant for first year pupils and five were not significant for second year pupils. Only two of the 28 items showed a reversal, with higher ratings given initially, for first year pupils and only one of the 28 items showed a reversal for second year pupils. These exceptions were in the area of "Interests and Experiences."

Summing up

- Parents from both project years rated their children higher
- on all of the 11 items in the area of language and concept development and
- on eight of the nine items in the area of personal and social development.

There were some differences between the project years in the area of motor skill development.

- Pupils in the first project year were rated higher upon entry into kindergarten on two of the four items in the motor skill area
- Second project year pupils were rated higher on all four items in motor skills.

HOW SATURDAY SCHOOL PUPILS COMPARED TO OTHER PUPILS UPON ENTRY INTO KINDERGARTEN

Parents' ratings of their children were collected prior to entry into kindergarten for pupils. Pupils who had attended the Saturday School Program during the first two project years were compared to pupils with no formal pre-school education.

Since there were two forms of "Introducing My Kindergarten Child" used by the project, it was not possible to compare first year Saturday School and Control Group I Pupils from the preceding year on all 47 items of the expanded form. It was possible, however, to compare these first project year pupils to Control Group II pupils (those entering kindergarten at the same time) on all items, as well as to use the expanded instrument in all analyses which involved second project year pupils. The results are organized below by project year.

Results of the First Program Year.

As just stated the first year Saturday School pupils could be compared to the Contral Group I pupils on only 15 items. Most of these 15 items were in the area of Personal and Social Development (N-10), with the remaining items measuring Language and Concept Development (N-5). There were no items which tapped the areas of motor skill development or interests and experiences. Therefore, Control Group II was used to provide a better basis for comparison with first project year Saturday School pupils. This control group consisted of pupils who entered kindergarten in 1972 (at the same time as first year Saturday School pupils) but who had no pre-school experience of any kind. The results of both sets of comparisons are given in Table 9.

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Table 8

A SUMMARY OF RESULTS COMPARING
FIRST PROJECT YEAR (N=649) SATURDAY SCHOOL STUDENTS
UPON ENTRY INTO KINDERGARTEN IN FALL, 1972
TO CONTROL KINDERGARTEN PUPILS
UPON ENTRY INTO KINDERGARTEN IN A) FALL, 1971 (N=911) AND B) FALL, 1972 (N=267)
ON ITEMS OF "INTRODUCING MY KINDERGARTEN CHILD"

Item	Group*	Year	Mean**	Standard Deviation	F	p
Personal and Social Development						
1. Child dresses self: gloves	S.S.	1972	1.76	.47		
	Control	1971	1.80	.44	2.59	n.s.
	Control	1972	1.73	.50	<1	n.s.
2. Child dresses self: coat, jacket, or sweater	S.S.	1972	1.90	.32		
	Control	1971	1.91	.31	<1	n.s.
	Control	1972	1.82	.42	10.24	<.005
3. Child dresses self: Boots	S.S.	1972	1.59	.61		
	Control	1971	1.57	.63	<1	n.s.
	Control	1972	1.59	.62	<1	n.s.
4. Child buttons, snaps, and zips clothing	S.S.	1972	1.81	.40		
	Control	1972	1.74	.47	5.44	<.025
5. Child ties shoelaces or bows	S.S.	1972	1.17	.90		
	Control	1971	1.61	.51	149.35	<.005
	Control	1972	1.14	.90	<1	n.s.
6. Child goes to toilet by himself	S.S.	1972	1.97	.18		
	Control	1972	1.98	.17	<1	n.s.
7. Child takes good care of things he uses	S.S.	1972	1.61	.49		
	Control	1971	1.23	.46	242.65	<.005
	Control	1972	1.59	.52	<1	n.s.
8. Child pays attention & concentrates well	S.S.	1972	1.42	.52		
	Control	1972	1.42	.52	<1	n.s.
9. Child follows simple directions without reminding	S.S.	1972	1.51	.51		
	Control	1971	1.93	.28	429.77	<.005
	Control	1972	1.48	.53	<1	n.s.
10. Child tells what he wants or needs	S.S.	1972	1.91	.29		
	Control	1971	1.63	.51	162.27	<.005
	Control	1972	1.89	.33	<1	n.s.
11. Child takes turns and shares	S.S.	1972	1.60	.50		
	Control	1972	1.61	.50	<1	n.s.
12. Child expresses feelings in acceptable ways	PCEE	1972	1.63	.51		
	Control	1972	1.64	.50	<1	n.s.
13. Child shows leadership in organizing games	PCEE	1972	1.16	.60		
	Control	1971	1.56	.53	185.91	<.005
	Control	1972	1.17	.62	<1	n.s.
14. Child remembers rules of games he plays	PCEE	1972	1.55	.54		
	Control	1971	1.27	.73	62.24	<.005
	Control	1972	1.45	.60	6.25	<.025
15. Child finishes a game even if he is losing	PCEE	1972	1.39	.58		
	Control	1971	1.94	.28	621.54	<.005
	Control	1972	1.39	.60	<1	n.s.
16. Child helps with simple household jobs	PCEE	1972	1.55	.52		
	Control	1972	1.53	.52	<1	n.s.
17. Child finishes a task	PCEE	1972	1.45	.53		
	Control	1972	1.44	.53	<1	n.s.

*The 1971 Control Group was rated on only 15 items similar to the 1972 Saturday School group.

**Each three-point scale was scored as follows:
0 = not at all
1 = once in a while
2 = often

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Table 8 (continued)

A SUMMARY OF RESULTS COMPARING
FIRST PROJECT YEAR (N=649) SATURDAY SCHOOL STUDENTS
UPON ENTRY INTO KINDERGARTEN IN FALL, 1972
TO CONTROL KINDERGARTEN PUPILS
UPON ENTRY INTO KINDERGARTEN IN A) FALL, 1971 (N=911) AND B) FALL, 1972 (N=267)
ON ITEMS OF "INTRODUCING MY KINDERGARTEN CHILD"

Item	Group*	Year	Mean**	Standard Deviation	F	p
Language and Concept Development						
1. Child speaks in sentences of 5 or more words	S.S.	1972	1.96	.20		
	Control	1972	1.97	.22	<1	n.s.
2. Child recites rhymes, sings songs	S.S.	1972	1.70	.50		
	Control	1971	1.94	.29	137.95	<.005
	Control	1972	1.59	.56	8.84	<.005
3. Child identifies 6 or more colors	S.S.	1972	1.93	.29		
	Control	1972	1.80	.50	25.00	<.005
4. Child tells events of a story or experience	S.S.	1972	1.82	.41		
	Control	1972	1.78	.46	1.66	n.s.
5. Child tells his whole name	S.S.	1972	1.95	.24		
	Control	1972	1.88	.40	10.12	<.005
6. Child tells address	S.S.	1972	1.46	.72		
	Control	1971	1.80	.44	135.61	<.005
	Control	1972	1.33	.78	6.02	<.025
7. Child tells telephone number	S.S.	1972	1.10	.89		
	Control	1971	1.84	.40	490.77	<.005
	Control	1972	.96	.91	4.64	<.05
8. Child tells how things are alike or different	S.S.	1972	1.73	.46		
	Control	1972	1.65	.55	5.22	<.025
9. Child identifies a few letters of the alphabet	S.S.	1972	1.79	.48		
	Control	1971	1.31	.82	175.10	<.005
	Control	1972	1.64	.62	15.58	<.005
10. Child identifies many letters of the alphabet	S.S.	1972	1.44	.81		
	Control	1971	.97	.90	111.09	<.005
	Control	1972	1.19	.90	16.80	<.005
11. Child reads simple sentences	S.S.	1972	.23	.56		
	Control	1972	.09	.31	15.12	<.005
12. Child counts from 1 to 10 or beyond	S.S.	1972	1.93	.30		
	Control	1972	1.89	.38	3.02	n.s.
13. Child recognizes numerals 0 to 10	S.S.	1972	1.75	.53		
	Control	1972	1.44	.74	51.97	<.005
14. Child groups objects into sets of 0 to 10	S.S.	1972	1.62	.59		
	Control	1972	1.34	.78	35.49	<.005

*The 1971 Control Group was rated on only 15 items similar to the 1972 Saturday School group.

**Each three-point scale was scored as follows:
0 = not at all
1 = once in a while
2 = often

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Table 9 (continued)

A SUMMARY OF RESULTS COMPARING
FIRST PROJECT YEAR (N=649) SATURDAY SCHOOL STUDENTS
UPON ENTRY INTO KINDERGARTEN IN FALL, 1972
TO CONTROL KINDERGARTEN PUPILS
UPON ENTRY INTO KINDERGARTEN IN A) FALL, 1971 (N=911) AND B) FALL, 1972 (N=267)

Item	Group*	Year	Mean**	Standard Deviation	F	p
Motor Skill Development						
1. Child runs, hops, and jumps	S.S.	1972	1.98	.16		
	Control	1972	1.96	.21	<1	n.s.
2. Child can ride tricycle or bicycle	S.S.	1972	1.97	.21		
	Control	1972	1.98	.17	<1	n.s.
3. Child aims and catches a ball	S.S.	1972	1.65	.51		
	Control	1972	1.62	.52	<1	n.s.
4. Child claps or marches in time with music	S.S.	1972	1.75	.47		
	Control	1972	1.70	.55	1.93	n.s.
5. Child skips	S.S.	1972	1.57	.70		
	Control	1972	1.57	.70	<1	n.s.
6. Child works a puzzle of 12 or more pieces	S.S.	1972	1.70	.51		
	Control	1972	1.51	.66	22.56	<.005
7. Child used paints & crayons with control	S.S.	1972	1.73	.48		
	Control	1972	1.68	.52	2.04	n.s.
8. Child uses scissors with control	S.S.	1972	1.64	.53		
	Control	1972	1.53	.65	7.20	<.01
9. Child includes major body parts & features in drawing a person	S.S.	1972	1.61	.59		
	Control	1972	1.38	.73	25.00	<.005
10. Child prints his first name correctly	S.S.	1972	1.63	.64		
	Control	1972	1.28	.80	49.28	<.005
11. Child prints his whole name correctly	S.S.	1972	.79	.84		
	Control	1972	.58	.76	12.67	<.005
Interests and Experiences						
1. Child is read to	S.S.	1972	1.56	.52		
	Control	1972	1.43	.53	11.70	<.005
2. Child enjoys music	S.S.	1972	1.78	.43		
	Control	1972	1.77	.45	<1	n.s.
3. Child goes to the library	S.S.	1972	.99	.74		
	Control	1972	.70	.74	28.84	<.005
4. Child watches "Sesame Street"	S.S.	1972	1.52	.59		
	Control	1972	1.44	.67	3.31	n.s.
5. Child goes shopping, visits interesting people and places in the community	S.S.	1972	1.59	.52		
	Control	1972	1.45	.60	12.89	<.005
6. Child takes trips outside the community	S.S.	1972	1.54	.55		
	Control	1972	1.44	.59	6.25	<.025

*The 1971 Control Group was rated on only 15 items similar to the 1972 Saturday School group.

**Each three-point scale was scored as follows:
0 = not at all
1 = once in a while
2 = often

00054

It can be seen in Table 9 that Saturday School pupils exceeded the Control Group I pupils on three of the 10 items in the Personal and Social Development area and on two of the five items in the Language and Concept Development Area. A criterion had been established that, in addition to statistical significance, the difference between the means would be at least one-eighth of the average standard deviation obtained for the item. All five items favoring Saturday School pupils exceeded this criterion.

In the comparisons made between Saturday School students and control pupils from the same year (Control Group II), there were

- three statistically significant differences on the 17 items in the area of Personal and Social Development,
- 11 statistically significant differences on the 14 items in the area of Language and Concept Development,
- five statistically significant difference on the 11 items in the Motor Skills Development area, and
- four statistically significant differences on the six items in the Interests and Experiences area.

All of the 32 statistically significant differences favored the Saturday School pupils over their controls. Moreover, all of the 32 mean differences exceeded the criterion of one-eighth standard deviation.

In general, the Saturday School students were rated as having greater language and concept development as well as higher motor skill development by their parents than were control pupils who entered kindergarten at the same time. In addition, Saturday school students were read to, taken to the library, and taken on trips inside and out of the community more often than pupils in this control group.

00055

Results of the Second Project Year.

Second project year Saturday School students were also compared to two control groups on the 47 items of the instrument "My Kindergarten Child." The first control group (Control Group I) consisted of pupils who entered kindergarten one year prior to the Saturday School pupils (the same pupils, in fact, who provided the second control group for the first year Saturday School pupils). The second control group (Control Group II) consisted of pupils who entered kindergarten at the same time as did second project year Saturday School students. None of the pupils in either control group had experienced any kind of preschool. The results of comparing second project year Saturday School pupils to both control groups are given in Table 10.

It can be seen in Table 10 that Saturday School pupils exceeded Control Group I from the preceding year on

- two of the 17 items in the area of Personal and Social Development, on
- 10 of the 14 items in the area of Language and Concept Development, on
- six of the 11 items in the area of Motor Skill Development, and
- four of the six items in the area of interests and experiences

On all 22 of the items that differentiated between second year Saturday School pupils and Control Group I pupils in a statistically significant manner, the criterion of one-eighth standard deviation difference between means was exceeded.

It should be noted that on no item did Control Group I score statistically significantly higher than the Saturday School.

00056

Table 10

A SUMMARY OF RESULTS COMPARING
SECOND PROJECT YEAR SATURDAY SCHOOL STUDENTS (N=519)
UPON ENTRY INTO KINDERGARTEN IN FALL, 1973
TO CONTROL KINDERGARTEN STUDENTS UPON ENTRY INTO KINDERGARTEN
IN FALL, 1972 (N=267) AND FALL, 1973 (N=152)
ON ITEMS OF "INTRODUCING MY KINDERGARTEN CHILD"

Item	Group	Year	Mean	Standard Deviation	F	p
Personal and Social Development						
1. Child dresses self: gloves	S.S.	1973	1.75	.47		
	Control	1972	1.73	.50	<1	n.s.
	Control	1973	1.65	.58	4.73	<.05
2. Child dresses self: coat, jacket, or sweater	S.S.	1973	1.86	.38		
	Control	1972	1.82	.42	1.90	n.s.
	Control	1973	1.82	.38	1.31	n.s.
3. Child dresses self: boots	S.S.	1973	1.54	.64		
	Control	1972	1.59	.62	1.13	n.s.
	Control	1973	1.53	.62	<1	n.s.
4. Child buttons, snaps, and zips clothing	S.S.	1973	1.81	.42		
	Control	1972	1.74	.47	4.50	<.05
	Control	1973	1.76	.47	1.56	n.s.
5. Child ties shoelaces or bows	S.S.	1973	1.11	.91		
	Control	1972	1.14	.90	<1	n.s.
	Control	1973	1.01	.95	1.38	n.s.
6. Child goes to toilet by himself	S.S.	1973	1.97	.17		
	Control	1972	1.98	.17	<1	n.s.
	Control	1973	1.99	.08	1.78	n.s.
7. Child takes good care of things he uses	S.S.	1973	1.63	.49		
	Control	1972	1.59	.52	1.17	n.s.
	Control	1973	1.53	.53	4.73	<.05
8. Child pays attention and concentrates well	S.S.	1973	1.47	.52		
	Control	1972	1.42	.52	1.64	n.s.
	Control	1973	1.41	.49	1.63	n.s.
9. Child follows simple directions without reminding	S.S.	1973	1.52	.51		
	Control	1972	1.48	.53	1.05	n.s.
	Control	1973	1.47	.51	1.13	n.s.
10. Child tells what he wants or needs	S.S.	1973	1.93	.26		
	Control	1972	1.89	.33	3.31	n.s.
	Control	1973	1.88	.35	3.70	n.s.
11. Child takes turns and shares	S.S.	1973	1.62	.49		
	Control	1972	1.61	.50	<1	n.s.
	Control	1973	1.64	.50	<1	n.s.
12. Child expresses feelings in acceptable ways	S.S.	1973	1.67	.48		
	Control	1972	1.64	.50	<1	n.s.
	Control	1973	1.62	.50	1.23	n.s.
13. Child shows leadership in organizing games	S.S.	1973	1.22	.62		
	Control	1972	1.17	.50	1.18	n.s.
	Control	1973	1.24	.64	<1	n.s.
14. Child remembers rules of games he plays	S.S.	1973	1.62	.50		
	Control	1972	1.45	.60	18.06	<.005
	Control	1973	1.44	.61	13.49	<.005
15. Child finishes a game even if he is losing	S.S.	1973	1.46	.55		
	Control	1972	1.39	.60	2.78	n.s.
	Control	1973	1.33	.62	6.25	<.025
16. Child helps with simple household jobs	S.S.	1973	1.57	.52		
	Control	1972	1.53	.52	1.05	n.s.
	Control	1973	1.52	.58	1.04	n.s.
17. Child finishes a task	S.S.	1973	1.46	.52		
	Control	1972	1.44	.53	<1	n.s.
	Control	1973	1.37	.55	3.37	n.s.

00057

Table 10 (continued)

Item	Group	Year	Mean	Standard Deviation	F	p
Language and Concept Development						
1. Child speaks in sentences of 5 or more words	S.S.	1973	1.98	.14		
	Control	1972	1.97	.22	<1	n.s.
	Control	1973	1.98	.14	<1	n.s.
2. Child recites rhymes, sings songs	S.S.	1973	1.76	.46		
	Control	1972	1.59	.56	21.11	<.005
	Control	1973	1.66	.53	5.17	<.025
3. Child identifies 6 or more colors	S.S.	1973	1.94	.29		
	Control	1972	1.80	.50	25.00	<.005
	Control	1973	1.77	.55	26.54	<.005
4. Child tells events of a story or experience	S.S.	1973	1.81	.42		
	Control	1972	1.78	.46	<1	n.s.
	Control	1973	1.78	.47	<1	n.s.
5. Child tells his whole name	S.S.	1973	1.95	.22		
	Control	1972	1.88	.40	10.12	<.005
	Control	1973	1.86	.43	11.98	<.005
6. Child tells his address	S.S.	1973	1.37	.76		
	Control	1972	1.33	.78	<1	n.s.
	Control	1973	1.14	.88	9.93	<.005
7. Child tells his telephone number	S.S.	1973	1.09	.90		
	Control	1972	.96	.91	3.65	n.s.
	Control	1973	.77	.86	15.23	<.005
8. Child tells how things are alike or different	S.S.	1973	1.77	.43		
	Control	1972	1.65	.55	11.76	<.005
	Control	1973	1.62	.59	12.17	<.005
9. Child identifies a few letters of the alphabet	S.S.	1973	1.84	.41		
	Control	1972	1.64	.62	29.22	<.005
	Control	1973	1.60	.66	29.75	<.005
10. Child identifies many letters of the alphabet	S.S.	1973	1.54	.75		
	Control	1972	1.19	.90	34.03	<.005
	Control	1973	1.14	.90	30.02	<.005
11. Child reads simple sentences	S.S.	1973	.26	.61		
	Control	1972	.09	.31	18.06	<.005
	Control	1973	.10	.36	9.47	<.005
12. Child counts from 1 to 10 or beyond	S.S.	1973	1.98	.17		
	Control	1972	1.89	.38	22.43	<.005
	Control	1973	1.89	.42	15.31	<.005
13. Child recognizes numerals from 0 to 10	S.S.	1973	1.81	.44		
	Control	1972	1.44	.74	77.61	<.005
	Control	1973	1.47	.76	48.15	<.005
14. Child groups objects into sets of 0 to 10	S.S.	1973	1.69	.55		
	Control	1972	1.34	.78	53.17	<.005
	Control	1973	1.20	.84	71.37	<.005

00058

Table 10 (continued)

Item	Group	Year	Mean	Standard Deviation	F	P
Motor Skill Development						
1. Child runs, hops, jumps	S.S.	1973	1.98	.13		
	Control	1972	1.96	.21	2.78	n.s.
	Control	1973	1.97	.16	<1	n.s.
2. Child can ride tricycle or bicycle	S.S.	1973	1.98	.19		
	Control	1972	1.98	.17	<1	n.s.
	Control	1973	1.99	.11	<1	n.s.
3. Child aims and catches a ball	S.S.	1973	1.67	.48		
	Control	1972	1.62	.52	1.83	n.s.
	Control	1973	1.59	.56	3.02	<.05
4. Child claps or marches in time to music	S.S.	1973	1.76	.46		
	Control	1972	1.70	.55	2.63	n.s.
	Control	1973	1.67	.55	4.18	<.05
5. Child skips	S.S.	1973	1.60	.67		
	Control	1972	1.57	.70	<1	n.s.
	Control	1973	1.53	.72	1.23	n.s.
6. Child works a puzzle of 10 or more pieces	S.S.	1973	1.70	.55		
	Control	1972	1.51	.66	18.65	<.005
	Control	1973	1.47	.68	18.14	<.005
7. Child uses crayons and paint with control	S.S.	1973	1.78	.44		
	Control	1972	1.68	.52	8.16	<.01
	Control	1973	1.63	.57	12.17	<.005
8. Child uses scissors with control	S.S.	1973	1.65	.53		
	Control	1972	1.53	.65	7.79	<.01
	Control	1973	1.43	.72	17.23	<.005
9. Child includes major body parts and features in drawing a person	S.S.	1973	1.64	.58		
	Control	1972	1.38	.73	29.34	<.005
	Control	1973	1.36	.77	23.31	<.005
10. Child prints first name correctly	S.S.	1973	1.73	.52		
	Control	1972	1.28	.80	91.67	<.005
	Control	1973	1.25	.84	73.47	<.005
11. Child prints whole name correctly	S.S.	1973	.89	.83		
	Control	1972	.58	.76	25.83	<.005
	Control	1973	.54	.79	21.21	<.005
Interests and Experiences						
1. Child is read to	S.S.	1973	1.57	.52		
	Control	1972	1.43	.53	12.89	<.005
	Control	1973	1.34	.50	22.96	<.005
2. Child enjoys music	S.S.	1973	1.79	.42		
	Control	1972	1.77	.45	<1	n.s.
	Control	1973	1.81	.41	<1	n.s.
3. Child goes to the library	S.S.	1973	.97	.74		
	Control	1972	.70	.74	23.25	<.005
	Control	1973	.49	.65	51.33	<.005
4. Child watches "Sesame Street"	S.S.	1973	1.61	.56		
	Control	1972	1.44	.67	14.27	<.005
	Control	1973	1.56	.63	<1	n.s.
5. Child goes shopping, visits interesting people and places in the community	S.S.	1973	1.57	.54		
	Control	1972	1.45	.60	8.16	<.01
	Control	1973	1.40	.62	11.11	<.005
6. Child takes trips outside the community	S.S.	1973	1.51	.55		
	Control	1972	1.44	.59	2.78	n.s.
	Control	1973	1.42	.58	3.11	n.s.

*Each three-point scale was scored as follows:
0 = Not at all; 1 = once in a while; and
2 = often

00059

When Saturday School students were compared to Control Group II pupils. it was found that the Saturday School group exceeded these controls on

- three of the 17 items in the Personal and Social Development area
- 12 of the 14 items in the area of Language and Concept Development
- on eight of the 11 items in the area of Motor Skill Development
- three of the six items in the area of Interests and Experiences.

On all 26 of the items on which the Saturday School pupils scored significantly higher, the criterion of a one-eighth standard deviation difference between means was exceeded.

Again, on no item did the Control Group I score statistically significantly higher than the Saturday School group.

Looking at the results obtained for both the first and second project year Saturday School pupils on the full, revised 47 item scale, it seems safe to say that the Saturday School Program has had its greatest impact on the area of Language and Concept Development where, on the average, 79% of the items favored the Saturday School pupils over their controls. The program has also apparently had a considerable impact onthe area of Motor Skill Development where, on the average, 58% of the items favored Saturday School pupils over their controls.

00060

SUMMARY: OTHER ASPECTS OF PUPIL GROWTH AS SEEN BY PARENTS

The project attempted to influence aspects of pupils' growth other than cognitive development. Parents were asked to rate their children on the following areas of development: personal - social; motor skills; language and concepts; interests and experiences. Saturday School pupils were rated prior to entry into the program and again one year later, prior to entry into kindergarten.

The results of the parents' ratings indicated:

How Saturday School Pupils Changed During the Program Year:

- STUDENTS WERE RATED HIGHER on all items measuring language and concept development.
- STUDENTS WERE RATED HIGHER on nearly 90% of the items measuring personal and social development.
- IN THE AREA OF MOTOR SKILL DEVELOPMENT, first year students were rated higher on one-half of the items. Second-year students were rated higher on all items in this area.

How Saturday School Students Compared to Their Controls Upon Entry Into Kindergarten

FIRST YEAR STUDENTS EXCEEDED their controls upon entry into kindergarten on:

- approximately 80% of the items measuring language and concept development.
- approximately 45% of the items topping Motor Skills Development.
- two-thirds of the items measuring interests and experiences.

00061

SECOND PROJECT YEAR STUDENTS EXCEEDED their controls on:

- approximately 80% of the items measuring language and concept development.
- approximately 63% of the items topping motor skill development.
- approximately 60% of the items measuring interests and experiences.

APPARENTLY, PARENTS PERCEIVED THE SATURDAY SCHOOL PROGRAM AS HAVING HAD A CONSIDERABLE IMPACT UPON A VARIETY OF NON-COGNITIVE ASPECTS OF THEIR CHILDREN'S DEVELOPMENT.

00062

other aspects of student growth as seen by the teachers

Teachers rated pupils on a variety of non-cognitive dimensions ranging from "responsiveness to learning activities" to "self-esteem." The rating scale used and the results follow.

DURING THE PROGRAM YEAR

How students with learning problems changed during the Saturday School year.

Each year, the consultant specialists to the Saturday School Project identified those Saturday School students who had learning problems due to either environmental or biological factors: emotional disorders, learning disabilities, low intellectual functioning, mental retardation, experiential deprivation, or physical disabilities.

These students were rated by their teachers on scales relating to their responsiveness to learning activities, their attainment of objectives, and their attitudes toward Saturday School. Ratings were made immediately after first and last home teaching sessions of each project year.

The means, standard deviations, and paired observation t-test results, as well as the proportions of pupils judged to be deficient (rated as "3" or less on each five-point scale), for all three project years are given in Table 11.

00053

Table 11

A SUMMARY OF INITIAL AND FINAL TEACHER RATINGS OF TARGET GROUP STUDENTS ON THEIR RESPONSIVENESS TO LEARNING ACTIVITIES, ACHIEVEMENT OF CONCEPTS IN HOME-TEACHING SESSIONS AND ATTITUDE TOWARD SATURDAY SCHOOL

Rating Scale	Project Year	N		Mean	Standard Deviation	t	p	Deficient* N	Deficient* %
Responsiveness to Learning Activities									
1. Outgoing vs. shy	First	330	Initial	3.29	1.26	14.62	<.01	181	55
			Final	4.25	.87			60	18
	Second	281	Initial	3.69	1.33	8.04	<.01	114	41
			Final	4.31	1.00			47	17
	Third	385	Initial	3.83	1.25	7.62	<.01	129	34
			Final	4.25	1.00			77	20
2. Cooperative vs. uncooperative	First	330	Initial	3.60	1.15	12.26	<.01	149	45
			Final	4.41	.82			34	10
	Second	281	Initial	4.05	1.19	5.82	<.01	77	27
			Final	4.46	.81			35	12
	Third	385	Initial	4.16	1.05	4.65	<.01	92	24
			Final	4.41	.80			53	14
3. Talkative vs. hesitant	First	330	Initial	3.18	1.30	14.54	<.01	193	58
			Final	4.21	.91			67	20
	Second	281	Initial	3.70	1.29	8.91	<.01	115	41
			Final	4.35	.89			41	15
	Third	384	Initial	3.78	1.25	7.77	<.01	140	36
			Final	4.22	1.00			82	21
4. Interested vs. disinterested	First	330	Initial	3.91	1.05	11.73	<.01	115	35
			Final	4.65	.66			22	7
	Second	281	Initial	4.28	.96	7.03	<.01	58	21
			Final	4.69	.96			18	6
	Third	385	Initial	4.44	.77	6.04	<.01	48	13
			Final	4.70	.55			15	4
5. Attentive vs. distracted	First	330	Initial	3.69	1.18	11.30	<.01	134	40
			Final	4.51	.80			35	11
	Second	281	Initial	4.03	1.14	7.05	<.01	82	29
			Final	4.49	.74			33	12
	Third	385	Initial	4.20	.96	4.04	<.01	90	23
			Final	4.41	.84			48	12
Achievement of Concepts									
1. Attained all vs. none of the objectives	First	330	Initial	3.74	1.08	11.70	<.01	134	40
			Final	4.49	.75			35	11
	Second	281	Initial	3.91	1.10	9.44	<.01	98	35
			Final	4.50	.76			30	11
	Third	385	Initial	4.23	.95	4.46	<.01	89	23
			Final	4.44	.75			45	12
Attitudes Toward Saturday School: Positive vs. Negative	First	330	Initial	3.84	1.08	13.07	<.01	121	37
			Final	4.65	.64			24	7
	Second	281	Initial	4.11	1.15	7.75	<.01	79	28
			Final	4.62	.72			24	9
	Third	383	Initial	4.35	.91	5.82	<.01	67	17
			Final	4.62	.70			29	8

*Deficiency was defined as a rating of "3" or less on each five-point scale.

00064

As can be seen from the results shown in Table 11, primary target group pupils from all three project years were rated statistically significantly higher on all items during the last home teaching session than they had been during the first session. Also, far fewer of these pupils were judged to be deficient in these traits at the end of each project year than had been the case at the beginning of each year. These traits included

- cooperation
- interest in learning activities
- attainment of concepts
- attitude toward Saturday School

Ratings on Skill Achievement of All Students

Saturday School teachers rated students on their skill development in the Personal and Social, Language, Math and Science Concept, and Motor areas at the end of all three project years. The frequency distributions for each item rated are given in Appendices A-1, A-2, and A-3 for the first, second, and third program years respectively. Inspection of these appendices shows that:

- The large majority (more than 65%) of Saturday School students from all three project years attained competency in all of the skills listed in all areas.
- The proportions of pupils attaining competency varied from between 65% and 68% for first and second year pupils (on the item "child identifies many letters of the alphabet") to 99% (on the item "child speaks in sentences of five or more words").
- The proportions of third year pupils attaining competency varied from 67% (on the item "child distinguishes words that rhyme") to 98% (shared by five of the three-point scales).

00065

Table 12

A SUMMARY OF INITIAL AND FINAL TEACHER RATINGS OF PUPILS' SELF ESTEEM

Rating Scale	Project Year	N		Mean*	Standard Deviation	t	p	Deficient** N	Deficient** %
1. Child adapts easily to new situations, feels comfortable in new settings, enters easily into new activities	First	755	Pre	3.42	.89	10.36	<.01	122	16
			Post	3.76	.81			60	8
	Second	649	Pre	3.41	.99	4.95	<.01	124	19
			Post	3.58	.84			76	12
	Third	685	Pre	3.55	.92	1.22	n.s.	98	14
			Post	3.58	.83			72	11
2. Child becomes upset by failures or other strong stresses as evidenced by such behaviors as pouting, whining, or withdrawing	First	755	Pre	2.62	.90	2.01	<.05	84	11
			Post	2.70	.93			85	11
	Second	649	Pre	2.51	.97	<1	n.s.	103	16
			Post	2.49	.98			104	16
	Third	685	Pre	2.64	.97	-1.92	n.s.	87	13
			Post	2.57	.87			77	11
3. Child seeks much support and reassurance from his peers or the teacher as is evidenced by seeking their nearness or frequent inquiries as to whether he is doing well	First	755	Pre	2.51	.83	5.34	<.01	88	12
			Post	2.72	.86			69	9
	Second	649	Pre	2.47	.99	1.81	n.s.	110	17
			Post	2.55	.97			110	17
	Third	685	Pre	2.84	1.00	-4.92	<.01	72	11
			Post	2.56	.85			86	13
4. Child continually seeks attention, as evidenced by such behaviors as speaking out of turn and making unnecessary noises	First	755	Pre	2.80	.98	4.50	<.01	88	12
			Post	2.97	.97			57	8
	Second	649	Pre	2.76	1.06	<1	n.s.	89	14
			Post	2.77	1.07			84	13
	Third	685	Pre	2.84	.98	-2.23	<.05	81	12
			Post	2.76	.92			63	9
5. Extent to which child shows a sense of self-esteem, self-respect, and appreciation of his own worthiness	First	755	Pre	3.19	.88	10.93	<.01	140	19
			Post	3.57	.91			91	12
	Second	649	Pre	3.18	.97	7.13	<.01	140	22
			Post	3.44	.97			107	16
	Third	685	Pre	3.23	.93	4.02	<.01	133	19
			Post	3.48	.93			90	13

*It should be noted that "5" represents the positive end of the continuum represented by each scale.

**Deficiency was defined as a rating of "2" or less on each five-point scale.

00066

In sum, it may be safely concluded that while not every child attained competency in every skill presented during each of the three project years, the vast majority of pupils did achieve what was expected of them in nearly all of the skills taught.

Teachers' Ratings of Students' Self-Esteem

All Saturday School pupils were rated by their teachers on five five-point scales taken from Coopersmith's "Behavior Rating Form" both at the beginning and end of each Saturday School project year. The items, together with the means, standard deviations, paired observation t-test results, as well as the proportions of pupils judged to be deficient (rated as less than "3") on each scale, are presented in Table 12.

Inspection of Table 12 shows that the results from the three project years were quite different.

- In the first project year Saturday School pupils were rated as having improved their standing on all five scales by the end of the program year.
- In the second project year Saturday School pupils were rated as having changed positively on two of the five scales.
- During the third and last project year, teachers rated pupils at the end of the year higher on one of the five scales and lower on two of the scales than had been the case at the beginning of the year.

The one item on which there appeared positive changes during all three years concerned itself with the extent to which a child showed a sense of self esteem. This scale appears to be a global rating while the other four scales seem to refer to specific behaviors which may represent only isolated aspects of the global concept of self esteem.

00067

When the data were analyzed to assess individual changes for those pupils judged to be initially deficient (rated as "2" or "1") on each of the rating scales, it was found that a substantial majority (54% to 83%) of the pupils judged to be initially deficient on the five rating scales gained at least one step in their final ratings. On the rating scale which is probably the most closely tied to the self esteem, (i.e., the fifth and final scale) between 70% and 76% gained at least one step.

FOLLOW UP INTO KINDERGARTEN AND FIRST GRADE

Former Saturday School Students Compared to Controls

Pupils from the first two project years were followed up into kindergarten where they were rated on all five scales by their kindergarten teachers and compared to Control Group II pupils who entered kindergarten at the same time but who had no preschool experience of any kind.

In addition, pupils from the first project year were followed up into first grade where they were again rated by their first grade teachers and compared to pupils entering first grade at the same time who had no preschool experience. A summary of the results of these analyses is given in Table 13.

It can be seen from data in Table 13 that kindergarten teachers rated Saturday School pupils and their controls as being essentially the same with regard to various aspects of self esteem. There was but one exception. This exception occurred on the global rating scale of self esteem where kindergarten teachers rated second year Saturday School pupils as displaying a greater sense of self esteem than control group pupils. First grade teachers, on the other hand, rated first year Saturday School pupils higher on three of the five rating scales than they did the control group. First grade teachers apparently saw Saturday School pupils as adapting more easily to new situations and seeking less support, reassurance, and attention than the control group pupils. There were no differences, however, in their global ratings of self esteem for the two groups.

00068

Table 13

RESULTS OF ANALYSES OF VARIANCE COMPARING
FIRST AND SECOND PROGRAM YEAR SATURDAY SCHOOL STUDENTS AND CONTROL GROUP PUPILS
ON "THE SELF ESTEEM SCALE"
AT THE BEGINNING OF THE KINDERGARTEN YEAR AND FIRST GRADE

Item	Project Year	Time of Rating	Group	N	Mean	Standard Deviation	F	P
1. Child adapts easily to new situations, feels comfortable in new settings, enters easily into new activities	First	Kdg.	S.S.	679	3.79	.86	3.25	n.s.
			Control	306	3.68	.93		
	First	1st Gr.	S.S.	484	3.60	.82	4.00	<.05
			Control	271	3.47	.91		
	Second	Kdg.	S.S.	599	3.67	.87	3.09	n.s.
			Control	185	3.54	.87		
2. Child becomes upset by failures or other strong stresses as evidenced by such behaviors as pouting, whining, or withdrawing	First	Kdg.	S.S.	679	3.86	.94	<1	n.s.
			Control	306	3.85	.96		
	First	1st Gr.	S.S.	484	3.61	.92	<1	n.s.
			Control	271	3.55	.96		
	Second	Kdg.	S.S.	599	3.72	.98	1.20	n.s.
			Control	185	3.63	.92		
3. Child seeks much support and reassurance from his peers or the teacher as is evidenced by seeking their nearness or frequent inquiries as to whether he is doing well.	First	Kdg.	S.S.	679	3.73	.98	2.54	n.s.
			Control	306	3.62	1.03		
	First	1st Gr.	S.S.	484	3.35	.91	4.34	<.05
			Control	271	3.20	1.01		
	Second	Kdg.	S.S.	599	3.44	.99	<1	n.s.
			Control	185	3.36	.93		
4. Child continually seeks attention, as evidenced by such behaviors as speaking out of turn and making unnecessary noises	First	Kdg.	S.S.	679	4.01	1.01	<1	n.s.
			Control	306	3.94	1.09		
	First	1st Gr.	S.S.	484	3.85	1.03	12.25	<.005
			Control	271	3.57	1.09		
	Second	Kdg.	S.S.	599	3.86	1.14	2.55	n.s.
			Control	185	3.71	1.03		
5. Extent to which child shows a sense of self-esteem, self-respect, and appreciation of his own worthiness	First	Kdg.	S.S.	679	3.42	.96	3.76	n.s.
			Control	306	3.29	.97		
	First	1st Gr.	S.S.	484	3.29	.90	3.35	n.s.
			Control	271	3.16	.99		
	Second	Kdg.	S.S.	599	3.16	.98	4.94	<.05
			Control	185	2.98	.90		

00069

In summary, the follow-up results on self-esteem appear to be mixed. Saturday School teachers tended to perceive pupils changing over the program year toward the more positive end of the self-esteem scales. This was most true, however, for first project year students. Kindergarten teachers perceived little difference in self-esteem between Saturday School pupils and their controls, while first grade teachers apparrently saw Saturday School pupils having more positive self-esteem than their controls.

These differences in results are difficult to explain. One hypothesis might be that the teachers have different notions of what constitutes positive self-esteem. This particular hypothesis is difficult to accept -- particularly when one notes that all teachers were trained to use the instrument in very similar inservice sessions. Another hypothesis could be that the pupils did, in fact, simply behave differently in kindergarten and first grade. This hypothesis seems more tenable; the initial trauma of finding one's place in a larger group when one goes to kindergarten may well be the same with or without preschool experience. Once past the kindergarten adjustment, skills learned in preschool may reassert themselves with resultant higher esteem.

A final possibility is that the rating scales used were just not sensitive enough to pick up differences. "Self-esteem" is a difficult construct to operationize. It may be that the Coopersmith rating scales just do not do the job with very young children.

Regardless, it is difficult at this time to explain with any degree of certainty the reasons for the mixed results obtained.

SUMMARY: OTHER ASPECTS OF STUDENT GROWTH
AS SEEN BY THE TEACHERS

As part of the project's attempt to measure non-cognitive aspects of pupil growth, teachers rated Saturday School pupils' self-esteem and skill development. They also rated handicapped Saturday School pupils on various scales relating to home visits. In addition, kindergarten and first grade teachers rated Saturday School pupils and their controls on self esteem.

The results of the teachers' ratings indicated the following:

- HANDICAPPED STUDENTS WERE RATED MORE POSITIVELY at the last home visit than at the first home visit on their responsiveness to learning activties; their achievement of concepts; and, their attitudes toward Saturday School.

- BETWEEN 65% AND 99% OF ALL PUPILS ACHIEVED COMPETENCY on all of the skills rated by their teachers.

- THE RESULTS ON SELF-ESTEEM WERE QUITE VARIED, dependent upon which project year pupils participated.

⇨ THE PROJECT APPARENTLY HAS HAD GREAT IMPACT UPON THE ATTITUDES AND BEHAVIORS OF HANDICAPPED PUPILS AND UPON THE SKILL DEVELOPMENT OF ALL PUPILS.

It is not possible at this time to state that the project has had a similar impact upon pupils' self-esteem.

00071

impact

on

parents

00072

program's impact on parents during the saturday school year

As part of the Saturday School Program, parents assisted teachers in Saturday School classes. In general, one parent from each family acted as a teaching assistant approximately once every two months.

During the final evaluation year, 77% of the parents met this criterion of serving at least four or more times in the Saturday School sessions. Only 2% of the parents did not volunteer at all, and in most cases, their were valid reasons.

In addition, parents were also generally present at the home teaching sessions, and were encouraged to follow up the sessions with suggestions from the Home Activity Guide.

Teachers rated parents on:

- the appropriateness of their teaching techniques during Saturday classes
- their attitudes toward the home teaching sessions, the teacher, and the child during the first and last home visits of each year.
- as to whether they used suggestions given by teachers to follow up home visits.

The results of these ratings follow.

PARENTS AS TEACHING ASSISTANTS

All parents were rated by Saturday School teachers at the beginning and end of the first Saturday School Program year. During the second and third project years, a random sample of approximately 25% of the parents were so rated. A summary of the results obtained from all three project years is given in Table 14.

00073

Table 14

A SUMMARY OF INITIAL AND FINAL TEACHER RATINGS
of
PARENTS' PERFORMANCE IN SATURDAY SCHOOL

Item	Project Year		N	Mean	Standard Deviation	t	p	Deficient N	Deficient %
1. Used appropriate versus inappropriate teaching techniques	First	Initial	670	4.02	.85	15.15	<.01	186	28
		Final		4.41	.75			89	13
	Second	Initial	159	4.23	.88	3.83	<.01	38	24
		Final		4.46	.77			22	14
	Third	Initial	146	4.24	.77	<1	n.s.	24	16
		Final		4.30	.88			27	18
2. Used positive versus negative reinforcement	First	Initial	670	4.04	.90	14.44	<.01	181	27
		Final		4.43	.77			92	14
	Second	Initial	159	4.22	.89	5.00	<.01	32	20
		Final		4.52	.71			18	11
	Third	Initial	146	4.25	.78	<1	n.s.	27	18
		Final		4.32	.81			23	16
3. Accomplished versus did not accomplish task assigned	First	Initial	670	4.27	.83	13.19	<.01	132	20
		Final		4.61	.66			57	9
	Second	Initial	160	4.38	.83	3.20	<.01	24	15
		Final		4.55	.71			17	11
	Third	Initial	146	4.32	.79	<1	n.s.	21	14
		Final		4.32	.79			20	14

During the first project year all parents were rated, whereas during the two succeeding years samples of approximately 25% were drawn randomly.

**Deficiency was defined as a rating of "3" or less on each five-point scale.*

00074

It can be seen in Table 14 that more than 70% of the parents from the first two project years were initially judged to be using appropriate techniques and accomplishing the tasks assigned to them (i.e., were rated as "4" or higher). During the third project year the initial proportion of parents so rated increased to approximately 85%. The proportion of parents judged to be using appropriate techniques by the end of the first two project years was approximately 85%, equivalent to the initial third year ratings. The third year parents, on the other hand, remained at fairly similar levels in their final ratings as they had on their initial ratings

There were statistically significant differences in the direction of greater use of appropriate teaching techniques and positive reinforcement as well as parent accomplishment of the tasks assigned in the first two years of project operation but not in the third.

The focus of the Saturday School was on those parents judged to be initially deficient on the three rating scales. Deficiency was defined as a rating of "3" or less on each five-point rating scale. The project goal was a one step increase in final ratings for these parents. When the gains in ratings of those parents judged to be deficient at the beginning of the three program years were analyzed it was found that:

1. Of the 25% (248) parents judged to be initially deficient in their use of appropriate techniques, 66% (163) met or exceeded the project's goal of a one step gain.

2. Of the 25% (240) parents initially judged to be deficient in their use of positive reinforcement, 66% (158) met or exceeded the goal of a one step gain.

3. Of the 18% (177) parents rated as being deficient in the accomplishment of their assigned tasks, 70% (124) met or exceeded the criterion of a one step gain in their final ratings.

Thus, the large majority of parents rated as being deficient at the beginning of the three project years on various aspects of their assignments as teaching assistants met or exceeded the project's goal of a one step gain in their final ratings. It should be noted again that approximately

85% of all the parents rated from the three project years were judged to be using appropriate teaching and reinforcement techniques and to be accomplishing the tasks assigned to them by the end of each of the three years of project operation.

PARENT'S ATTITUDES TOWARD THE HOME TEACHING SESSION, THE TEACHER, AND THE CHILD

Following the first or second home teaching session in the fall of each of the three project years, and again after the last home visit in the spring, the teachers rated the parents of Saturday School children on eleven five-point scales pertaining to parent attitudes.

A summary of the results for the three project years, including initial and final means and standard deviations, paired observation t-test results, as well as the proportions of parents judged to be deficient (rated as "3" or less) on each of the five-point scales, as presented in Table 15.

00076

Table 15

A SUMMARY OF INITIAL AND FINAL TEACHER RATINGS
of
PARENTS' ATTITUDES
TOWARD THE HOME VISIT, THE CHILD AND THE TEACHER

Rating Scale	Project Year	N		Mean	Standard Deviation	t	p	Deficient N	Deficient %
Parent Attitude Toward the Teaching Session									
a. Positive vs. negative	First	704	Initial	4.17	.92	11.47	<.01	176	25
			Final	4.62	.66			62	9
	Second	637	Initial	4.60	.75	4.52	<.01	78	12
			Final	4.76	.62			32	5
	Third	650	Initial	4.63	.65	2.91	<.01	43	7
			Final	4.71	.61			30	5
b. Interested vs. disinterested	First	703	Initial	4.17	.92	9.41	<.01	175	25
			Final	4.57	.76			70	10
	Second	637	Initial	4.59	.75	3.82	<.01	78	12
			Final	4.73	.66			40	6
	Third	650	Initial	4.63	.68	3.16	<.01	49	8
			Final	4.72	.64			36	6
c. Self-confident vs. lacking self-confidence	First	703	Initial	3.74	1.03	16.17	<.01	290	41
			Final	4.43	.79			101	14
	Second	637	Initial	4.37	.90	6.93	<.01	120	19
			Final	4.62	.75			59	9
	Third	650	Initial	4.42	.84	5.31	<.01	97	15
			Final	4.60	.72			63	10
Parent Interaction with Child									
a. Accepting vs. unaccepting	First	702	Initial	3.94	.94	14.42	<.01	228	32
			Final	4.51	.73			78	11
	Second	637	Initial	4.51	.82	3.69	<.01	92	14
			Final	4.64	.68			47	7
	Third	650	Initial	4.49	.77	3.76	<.01	79	12
			Final	4.61	.69			45	7
b. Aware vs. unaware of needs	First	702	Initial	3.50	1.03	16.33	<.01	342	49
			Final	4.21	.90			176	25
	Second	637	Initial	4.17	1.01	6.56	<.01	147	23
			Final	4.44	.82			83	13
	Third	650	Initial	4.16	1.05	5.70	<.01	169	26
			Final	4.38	.84			91	14
c. Motivation positive vs. negative	First	702	Initial	3.62	.97	16.59	<.01	323	46
			Final	4.30	.84			128	18
	Second	637	Initial	4.30	.91	5.76	<.01	136	21
			Final	4.51	.77			71	11
	Third	650	Initial	4.29	.95	5.63	<.01	133	20
			Final	4.50	.78			77	12
d. Reinforcement positive vs. negative	First	702	Initial	3.57	.97	17.35	<.01	347	49
			Final	4.29	.83			128	18
	Second	637	Initial	4.32	.92	5.14	<.01	134	21
			Final	4.50	.78			71	11
	Third	650	Initial	4.28	.95	6.12	<.01	132	20
			Final	4.51	.77			73	11
e. Competent vs. incompetent	First	702	Initial	3.74	.97	17.42	<.01	288	41
			Final	4.41	.80			106	15
	Second	637	Initial	4.36	.87	6.80	<.01	126	20
			Final	4.60	.74			60	9
	Third	650	Initial	4.35	.89	7.47	<.01	119	18
			Final	4.60	.68			46	7

00077

Table 15 (continued)

Rating Scale	Project Year	N		Mean	Standard Deviation	t	p	Deficient N	Deficient %
Parent Relationship With Teacher									
a. Friendly vs unfriendly	First	702	Initial	4.35	.81	12.79	<.01	128	18
			Final	4.77	.56			34	5
	Second	637	Initial	4.66	.70	5.38	<.01	70	11
			Final	4.83	.50			21	3
	Third	650	Initial	4.71	.60	5.08	<.01	38	6
			Final	4.83	.49			18	3
b. Cooperative vs. uncooperative	First	702	Initial	4.32	.84	8.63	<.01	140	20
			Final	4.65	.72			61	9
	Second	637	Initial	4.64	.72	4.26	<.01	78	12
			Final	4.77	.57			29	5
	Third	650	Initial	4.66	.67	4.76	<.01	50	8
			Final	4.79	.52			20	3
c. At ease vs. ill at ease	First	701	Initial	4.07	.97	14.12	<.01	207	30
			Final	4.63	.69			62	9
	Second	637	Initial	4.48	.83	7.08	<.01	102	16
			Final	4.73	.61			34	5
	Third	650	Initial	4.50	.80	6.35	<.01	85	13
			Final	4.69	.60			31	5

It can be seen in Table 15 the vast majority of parents were rated by their children's teachers as being positive toward, and interested in, the home teaching session initially (especially in the second and third project years). The large majority of parents were rated as being friendly toward, cooperative and at ease with, the teachers at the beginning of each project year. A somewhat smaller majority were found to be using appropriate modes of interacting with, and to have positive attitudes toward, their children at the beginning of each year.

The ratings received by these parents at the end of the year were statistically significantly higher on all of the scales in the direction of

- more positive attitudes toward the teaching session,
- better modes of interaction with children,
- better relationships with the teachers.

Concomitantly, there were decreases in the proportions of parents judged to be deficient (rated as "3" or less) from initial to final ratings on every scale.

00078

The project's primary focus was on those parents who had been rated by teachers as being deficient in their attitudes toward the teaching session, the teacher, and the child. The project goal was to obtain an increase of at least one step for each five-point rating scale on which the parent had been judged to be deficient during the first home visit. Analyses of the gain scores made by these parents showed the following:

Parent attitude toward the teaching session

Positive vs. negative attitudes. Of the 1991 parents rated by teachers at the beginning and end of the three project years on this scale, 297 (15%) were judged to be initially deficient. Of these 297 parents, 264 (89%) met or exceeded the project goal of a one-step gain in their ratings.

Interested vs. disinterested. Of the 302 (15%) parents judged to be initially deficient in this trait, 264 (87%) met or exceeded the goal of a one step gain in their final ratings.

Self-confident vs. lacking self-confidence. Of the 507 parents (25%) rated as being deficient on this scale at the beginning of the three project years, 433 (85%) met or exceeded the expectation of a one step gain set for them.

Parent interaction with the child

Accepting vs. unaccepting. Of the 399 parents (20%) judged to be initially deficient in their acceptance of their children, 352 (88%) met or exceeded the project goal set for them.

Aware vs. unaware of needs. Of the 658 parents (33%) initially rated as deficient in their awareness of their children's needs, 543 (83%) met or exceeded the expectation of a one step gain.

Motivation positive vs. negative. Of the 592 parents (30%) judged to be initially deficient in their use of positive motivation, 483 (82%) met or exceeded the project goal of a one step gain.

Reinforcement positive vs. negative. Of the 613 parents (31%) rated as being initially deficient in their use of positive reinforcement, 498 (81%) met or exceeded the goal set for them.

Competent vs. incompetent. Of the 535 parents (27%) judged by teachers to be initially deficient in this trait, 449 (84%) met or exceeded the project goal.

Parent relationship with teachers

Friendly vs. unfriendly. Of the 236 parents (12%) judged to be initially deficient on this five-point scale, 216 (92%) met or exceeded the goal of a one-step gain.

Cooperative vs. uncooperative. Of the 268 parents (13%) rated as being initially deficient in this trait. 237 (88%) met or exceeded the goal set for them.

At ease vs. ill at ease. Of the 394 parents (20%) judged to be initailly deficient on this five-point scale, 347 (88%) met or exceeded the project goal.

In general, the vast majority of the parents were found to be :

- positive in their attitudes toward, and interested in, the teaching session;
- showing self-confidence; accepting of their children:

00080

- aware of their children's needs; using positive motivation and reinforcement techniques;
- competent in their interaction with their children and
- friendly toward, cooperative and at ease with the teacher.

Of those parents initially rated as deficient in these traits, not all increased by the minimum of the one step set as the project's goal.

However, between 81% and 92% of the parents from the three project years did achieve this goal on the different rating scales.

PARENTS' USE OF SUGGESTIONS FOR FOLLOWING UP HOME TEACHING

Teachers rated parents on the extent to which they used materials or activities suggested by Saturday School teachers on three-point rating scales. The results of these ratings for all three project years is given in Table 16.

Table 16

A SUMMARY OF INITIAL AND FINAL TEACHER RATINGS of PARENTS' USE OF ACTIVITIES AND MATERIALS SUGGESTED BY TEACHERS

Rating Scale	Project Scale	N		Mean	Standard Deviation	t	p	Did not Use Materials or Activities N	Did not Use Materials or Activities %
Parents used materials or activities suggested	First	691	Initial	.73	1.04	7.86	<.01	329	48
			Final	.80	.77			177	26
	Second	638	Initial	.80	.84	10.33	<.01	292	46
			Final	1.23	.76			129	20
	Third	646	Initial	1.11	.70	<1	n.s.	127	20
			Final	1.11	.70			128	20

00081

It may be seen that large proportions of parents were judged to be deficient on this scale during the first and second project years (i.e., received a rating of "0" on this three point scale). By the end of the first two project years, there were substantial decreases in the proportions of parents who were rated as not having used the activities or materials suggested. This is also reflected in the statistically significant paired observation t test results. During the third project year, however, a much smaller proportion of parents was rated as using no materials during the first home visit. This initial figure for third year parents is, in fact, indentical to that obtained at the end of the year for the second project year. The proportion of parents deficient on this scale remained constant in the third year end-of-the-year ratings thus giving rise to the non-statistically significant t test result.

In general, between 52% and 80% of the parents were initially rated as using one or more activities or materials suggested by the teacher. By the end of the three years between 74% and 80% of the parents used at least one activity suggested. These figures fairly well approximated the project's goal of having all parents use at least one activity suggested by the teacher by the end of the project year.

00082

parent follow up into kindergarten

The vast majority of kindergarten pupils and their parents in the school district received at least one home visit during the 1972-1973 and 1973-1974 school years. Parents of first and second project year Saturday School pupils were rated by the kindergarten teachers on the same attitudinal scales that were used during the Saturday School Program year. In addition, parents of kindergarten pupils who had no preschool experience were also rated on these scales and thus constituted a control group for the Saturday school Parents.

In addition to collecting ratings of parents after the home visit, kindergarten teachers also kept records of which parents volunteered to assist in kindergarten classes during the 1973-1974 year. This enabled the project staff to determine whether the experience of assisting in Saturday classes had some long term impact.

The results of the analyses of the data collected during the kindergarten year are presented below.

Parents' Attitudes at the Home Teaching Session

Kindergarten teachers' ratings of Saturday School parents on eleven five-point scales were compared to their ratings of parents whose children had no preschool experience of any kind. These rating scales were concerned with parents' attitudes toward

a) the home visit,

b) the child and,

c) the teacher.

The results of the comparisons are presented in Table 17.

00083

Table 17

RESULTS OF ANALYSES OF VARIANCE FOR KINDERGARTEN PARENTS
on
ITEMS OF THE KINDERGARTEN HOME TEACHING REPORT

Item	Project Year	Group	N	Mean	Standard Deviation	F	p	Deficient N	Deficient %
Parent attitude toward visit									
a. Positive vs. negative	First	PCEE	426	4.74	.56	4.31	<.05	21	5
		Control	183	4.63	.69			18	10
	Second	PCEE	468	4.76	.57	<1	n.s.	3	1
		Control	135	4.72	.65			3	2
b. Interested vs. disinterested	First	PCEE	423	4.74	.56	1.74	n.s.	39	9
		Control	180	4.67	.68			11	6
	Second	PCEE	468	4.77	.59	<1	n.s.	5	1
		Control	135	4.73	.65			5	4
c. Self-confident vs. lacking self-confidence	First	PCEE	420	4.55	.76	14.32	<.005	46	11
		Control	179	4.27	.97			37	21
	Second	PCEE	468	4.50	.78	7.02	<.01	10	2
		Control	136	4.29	.97			10	7
Parent interaction with child									
a. Accepting vs. rejecting	First	PCEE	393	4.62	.75	<1	n.s.	38	10
		Control	159	4.60	.76			15	10
	Second	PCEE	462	4.61	.73	<1	n.s.	6	1
		Control	131	4.59	.78			3	2
b. Aware vs. unaware of needs	First	PCEE	425	4.25	1.02	2.39	n.s.	87	22
		Control	161	4.10	1.09			43	27
	Second	PCEE	462	4.28	.94	3.48	n.s.	23	5
		Control	131	4.11	1.11			12	9
c. Positive vs. negative motivation	First	PCEE	384	4.38	.91	1.56	n.s.	62	16
		Control	127	4.27	.96			32	20
	Second	PCEE	459	4.39	.86	5.60	<.025	15	3
		Control	131	4.18	.98			8	6
d. Positive vs. negative reinforcement	First	PCEE	385	4.33	.96	2.40	n.s.	71	19
		Control	157	4.20	1.10			36	23
	Second	PCEE	458	4.35	.91	5.46	<.025	19	4
		Control	130	4.13	1.03			10	8
e. Competent vs. incompetent	First	PCEE	389	4.38	.88	3.65	n.s.	63	16
		Control	155	4.21	1.04			38	24
	Second	PCEE	463	4.37	.91	4.67	<.05	18	4
		Control	127	4.17	1.01			15	12
Parent relationship with teacher									
a. Friendly vs. unfriendly	First	PCEE	426	4.80	.48	<1	n.s.	15	4
		Control	182	4.77	.52			6	4
	Second	PCEE	473	4.78	.60	<1	n.s.	14	3
		Control	136	4.74	.64			6	4
b. Cooperative vs. uncooperative	First	PCEE	423	4.78	.52	<1	n.s.	18	4
		Control	180	4.74	.55			10	6
	Second	PCEE	473	4.77	.62	<1	n.s.	18	4
		Control	136	4.78	.60			2	1
c. At ease vs. ill at ease	First	PCEE	422	4.44	.70	<1	n.s.	34	9
		Control	180	4.43	.88			27	15
	Second	PCEE	473	4.59	.76	<1	n.s.	5	1
		Control	136	4.53	.85			6	4

It can be seen in Table 17 that there were only six statistically significant differences between ratings received by Saturday School parents and parents of pupils who had not attended Saturday School. It was found that:

- First project year Saturday School parents were judged by kindergarten teachers to be more positive toward the home visit and more self-confident than were control parents.

- Second project year parents were rated as using more positive motivation and reinforcement techniques with their children than were the parents in the control group.

- Second project year parents were also judged to be more competent and self-confident than were the parents of children who had not participated in the Saturday School program.

Thus, of the 22 comparisons made, all six statistically significant differences were in favor of Saturday School parents. Four of the six significant comparisons occurred in the group of second project year parents. These four differences represent more than one-third of the possible differences on the eleven items on which the groups were compared. Apparently, the Saturday School program had a greater impact on parents during its second year of operation that during its first year. It will be interesting to see whether the trend of greater impact continues as third project year pupils enter kindergarten during the current 1974-1975 school year.

00085

PARENTS AS VOLUNTEERS IN KINDERGARTEN

An attempt was made to determine whether parents who had the experiences of assisting in Saturday School would be more likely to volunteer to assist in kindergarten classes than parents whose children had not participated in the Saturday School Program. During the 1973-1974 school year, tallies were made of the number of parents helping in all but one of the elementary schools in the district. Of the 869 children in these schools, the parents of 416 (48%) volunteered to assist in the kindegarten program. More than half of these volunteers served on a regular or weekly basis.

Of the 416 parents, 308 (74%) were the parents of second project year Saturday School pupils. Children of the remaining 108 parents (26%) were not involved in Saturday School. Approximately 62% of the pupils in kindergarten had participated in the Saturday School Program during the preceding year.

By chance alone, one would expect about 258 of those 416 parents who assisted in kindergarten to be parents of Saturday School pupils. Instead, the figure was found to be 308 or 74%. This percentage was significantly larger than what would be expected $\chi^2 = 25.50$; $p < .001$.

Parents of Saturday School students assisted in kindergarten more often than did parents of pupils who had not participated in the project.

00086

SUMMARY: THE PROGRAM'S IMPACT ON PARENTS

In addition to affecting growth in participating students. the project sought to impart impact upon participating parents.

Parents were rated by their children's teachers on the appriateness of the teaching techniques displayed when they acted as teaching assistants in Saturday School. They were also rated on their attitudes toward the home teaching session, the teacher, and the child. These ratings were made at the beginning and end of each project year. The results indicated the following:

Patents as Teaching Assistants:

- FIRST AND SECOND PROGRAM YEAR PARENTS INCREASED their use of appropriate teaching techniques and positive reinforcement by the end of the year. They also accomplished more of the tasks assigned them.

- MORE THAN 80% OF ALL PARENTS from all three project years were found to be using appropriate teaching and reinforcement techniques by the end of each year.

Parent Attitudes:

- PARENTS WERE RATED HIGHER ON ALL SCALES pertaining to their attitudes toward the home teaching session, the teacher, and the child after the last session than they had been after the first session.

00087

. BETWEEN 81% AND 92% OF THOSE PARENTS INITIALLY JUDGED "DEFICIENT" on the five-point rating scales achieved the project's goal of a one-step gain in ratings.

⇨ THE PROJECT HAS HAD CONSIDERABLE IMPACT NOT ONLY ON THE SKILLS, BUT ALSO ON THE ATTITUDES OF THE PARENTS INVOLVED.

00088

impact on teachers

00089

program's impact on teachers as perceived by the project director

The teachers who staffed the Saturday School program were trained by the Project Director and Consultant Specialists to not only teach pupils with respect to their strengths and weaknesses, but also to

- test children on their cognitive development,
- rate children on their skill and affective development,
- identify potentially handicapped pupils, and to,
- train parents in the use of appropriate teaching techniques.

The processes by which the staff was trained in these competencies are described in detail in another publication in this series, "Putting Together a Staff Development Program for Preschool Teachers."

In order to monitor teachers' competencies with respect to

a) their use of appropriate techniques,

b) their establishment of positive attitudes toward parents, and

c) their demonstration of appropriate techniques to parents,

all Saturday School teachers were rated by the Project Director on two series of five-point rating scales several times during each project year.

A description of the scales, together with the results, follows.

00090

The Use of Appropriate Teaching Techniques by the Staff

Data were collected on five 5-point scales by the Project Director during Saturday School classes at the beginning and end of each project year and during one home visit with each teacher midyear.

The beginning and end of the year Saturday School ratings were compared using observations t-tests. A summary of the results is given in Table 18.

Table 18

A SUMMARY OF INITIAL AND FINAL RATINGS OF TEACHER USE OF APPROPRIATE TEACHING REINFORCEMENT, AND MOTIVATIONAL TECHNIQUES

Rating Scale	Project Year	N		Mean	Standard Deviation	t	p	Deficient* N	Deficient* %
Used appropriate vs. inappropriate teaching techniques	First	25	Initial	3.64	.83	9.80	<.01	11	44
			Final	4.44	.71			3	12
	Second	24	Initial	3.25	.68	5.00	<.01	19	79
			Final	4.08	.78			6	25
	Third	17	Initial	3.65	.70	1.46	n.s.	8	47
			Final	3.88	.70			5	29
Aware vs. unaware of children's needs	First	25	Initial	3.68	.63	6.53	<.01	9	36
			Final	4.32	.69			3	12
	Second	24	Initial	3.00	.71	5.87	<.01	18	75
			Final	3.72	.61			6	25
	Third	17	Initial	3.53	.80	3.05	<.01	9	53
			Final	4.12	.60			2	12
Used positive vs. negative motivation	First	25	Initial	3.84	.69	5.20	<.01	7	28
			Final	4.44	.58			1	4
	Second	24	Initial	3.46	.88	7.71	<.01	11	46
			Final	4.71	.55			1	4
	Third	17	Initial	4.41	.51	2.07	n.s.	0	0
			Final	4.76	.44			0	0
Used positive vs. negative reinforcement	First	25	Initial	3.80	.71	5.63	<.01	8	32
			Final	4.44	.58			1	4
	Second	24	Initial	3.33	.87	7.29	<.01	12	50
			Final	4.71	.55			1	4
	Third	17	Initial	4.41	.51	2.38	<.05	0	0
			Final	4.82	.39			0	0
Accomplished task objectives: 0-100%	First	25	Initial	3.44	.58	4.00	<.01	14	56
			Final	3.84	.37			4	16
	Second	24	Initial	3.33	.64	10.14	<.01	16	67
			Final	4.62	.58			1	4
	Third	17	Initial	4.18	.81	1	n.s.	4	24
			Final	4.24	.66			2	12

*Deficiency was defined as a score of three or less on each five-point scale.

00091

It can be seen that large proportions of teachers were judged to be deficient in their use of appropriate teaching techniques and in their awareness of children's needs at the beginning of all three project years. By the end of the first two years, however,there were significant decreases in the numbers of teachers rated as deficient in these traits.

During the first two project years, large proportions of teachers were rated as initially deficient in their use of positive motivation and reinforcement techniques. At the end of the first two project years, there were statistically significant decreses in the numbers of teachers judged to be deficient in these traits. In fact, only one teacher was so rated in each of the years.

It should be noted that no teacher was judged deficient in either teaching techniques or use of reinforcement techniques at either the beginning or end of the third project year.

Large proportions of teachers were initially judged to be deficient in accomplishing task objectives during the first two project years. Again, there were statistically significant decreases in the proportions of teachers so judged at the end of each of the two years.

In general, sizable proportions of teachers were rated as being deficient (i.e., average or below average on the five-point scales) at the beginning of the first two project years. By the end of those first two years, most of those teachers judged to be deficient showed that they had changed sufficiently so as to be rated as using appropriate techniques.

00092

The project's goal was that each teacher be rated at least "4" on a 5-point scale by the end of the program year on each scale.

- Between 84% and 96% reached the criterion by the end of the first project year
- between 75% and 96% of the teachers reached criterion by the end of the second project year; and
- between 71% and 100% of the teachers reached the criterion during the third project year.

While 100% achievement of the criterion was not reached on all five scales, it was met on two of the scales during the final project year and closely approached on the other three scales.

The Demonstration of Appropriate Techniques to Parents by Staff

Data were collected on two five-point scales by the Project Director during Saturday School classes at the beginning and end of each of the three program years and during one mid-year home visit. Ratings made at Saturday School at the beginning and end of each project year were compared using paired observation t-tests. A summary of these results is presented in Table 19.

00093

Table 19

A SUMMARY OF INITIAL AND FINAL RATINGS OF TEACHERS' EFFECTIVENESS IN DEMONSTRATING APPROPRIATE TEACHING TECHNIQUES TO PARENTS

Rating Scale	Project Year	N		Mean	Standard Deviation	t	p	Deficient N	Deficient %
Demonstrated appropriate teaching techniques: effectively--ineffectively	First	25	Initial	3.64	.76	6.11	<.01	12	48
			Final	4.32	.69			3	12
	Second	24	Initial	3.17	.64	8.31	<.01	19	79
			Final	4.17	.64			3	12
	Third	17	Initial	4.00	.50	2.38	<.05	2	12
			Final	4.41	.51			0	0
Demonstrated positive motivation and reinforcement techniques: effectively--ineffectively	First	25	Initial	3.76	.72	6.12	<.01	9	36
			Final	4.44	.58			1	4
	Second	24	Initial	3.29	.62	7.43	<.01	17	71
			Final	4.29	.46			0	0
	Third	17	Initial	4.12	.33	2.06	<.05	0	0
			Final	4.41	.51			0	0

It can be seen that teachers were rated by the Project Director as being significantly more effective at the end of each project year in demonstrating appropriate teaching, motivation, and reinforcement techniques than they were at the beginning of the year. Concomitantly, there were far fewer teachers judged to be deficient at the end of each year than at the beginning.

<u>At the end of the third program year, all teachers had reached the criterion set for them on both rating scales.</u>

That is, all teachers were rated by the Project Director as being above average in the effectiveness of their demonstrations to parents of appropriate pedagogical techniques.

00094

ESTABLISHING POSITIVE RELATIONSHIPS WITH PARENTS

Data were collected on teachers' modes of interacting with parents during Saturday School at the beginning and end of each program year and during one home visit midyear, as rated by the Project Director. The initial and final Saturday School ratings made by the Project Director were compared using paired observation t-tests. A summary of the results obtained for the three years of project operation is given in Table 20.

TABLE 20

A SUMMARY OF INITIAL AND FINAL RATINGS
of
TEACHERS' RELATIONSHIPS WITH PARENTS

Rating Scale	Project Year	N		Mean	Standard Deviation	t	P	Deficient N	Deficient %
Respect for parent competencies: evident vs. not-evident	First	25	Initial	3.76	.66	4.41	<.01	7	28
			Final	4.28	.61			2	8
	Second	24	Initial	3.58	.72	5.44	<.01	13	54
			Final	4.33	.56			1	4
	Third	17	Initial	4.53	.51	<1	n.s.	0	0
			Final	4.65	.61			0	0
Relationship with parents: positive vs. negative	First	25	Initial	3.80	.65	7.86	<.01	8	32
			Final	4.52	.65			2	8
	Second	24	Initial	3.75	.79	4.73	<.01	9	38
			Final	4.38	.58			1	4
	Third	17	Initial	4.47	.51	1.14	n.s.	0	0
			Final	4.65	.49			0	0

During the first two project years, it can be seen that substantial proportions of teachers were rated as being deficient in their respect for parent competencies and in their relationships with parents. By the end of each of these project years, however, there were statistically significant improvements in the ratings of these teachers.

During the third program year, no teacher was judged deficient on either of the two scales, either initially or finally.

<u>During the final project year, the project's goal of 100% attainment of the criterion of no deficiency was met.</u>

00095

program's impact on teachers as perceived by the parents

How Parents Rated Saturday School Teachers and The Program

Parent ratings of both the Saturday School and their children's teachers were collected at the end of the second and third project years. Parents (610 from the second year and 577 from the third year) responded to ten five-point scales evaluating different aspects of the program and parental perceptions of the teachers. The ten items, together with the N's and percentages for each point of the scales are given in Appendices B-1 and B-2 for the second and third years respectively.

Inspection of these appendices shows the following about how parents saw the Saturday School program:

- The vast majority of parents (more than 98%) thought that the tasks presented to their children were interesting and met their educational needs.
- More than 96% of the parents thought the home visit was a good learning experience for both child and parent.
- About 95% of the parents thought that as a result of participating in the program, they felt better able to deal with their child both educationally and personally.
- A somewhat smaller majority (80%) agreed with the statements that they would like to receive home visits when their children go to kindergarten and that as a result of their experience in teaching Saturday School they would like to assist in the kindergarten (about 75%).

00096

Looking at the scales dealing with their children's teachers, it may be seen that more than 90% of the parents thought that:

- Their child's teacher seemed to be very interested in their child as an individual
- The teacher prepared and explained the parents' lessons well to them when they taught at Saturday School
- Their child's teacher liked the parents both as parents and people.
- They also stated that if they had another pre-school child they would like him to be taught by the same teacher and that the teacher had really got them interested in doing more with their children than they had ever done before.

In sum, parents responded very positively to all aspects of the program as well as to the impact the teacher had on both them and their child.

In sum, parents responded very positively to all aspects of the program as well as to the impact the teacher had on both them and their child.

00037

SUMMARY: PROGRAM'S IMPACT ON ITS TEACHERS

All teachers on the Saturday School staff were rated by the Project Director at the beginning and end of each project year on their

- use of appropriate teaching techniques,
- the adequacy of their demonstration of teaching techniques to parents, and
- the quality of their relationships with parents.

Parents also rated the staff on the teachers' interactions with both pupils and parents.

The results of these ratings indicated the following:

Ratings by the Project Director:

- TEACHERS FROM THE FIRST TWO PROGRAM YEARS significantly increased their use of appropriate teaching techniques.
- BY THE END OF THE THIRD PROJECT YEAR, no teacher was judged to be "deficient" in the effective demonstration of teaching techniques to parents.
- MORE THAN 90% OF ALL TEACHERS were judged to have established positive relationships with parents and to have shown respect for parent competencies by the end of the three project years.

00698

Ratings By Parents

More than 90% of the parents agreed that the teachers:

- WERE VERY INTERESTED in the parents' children
- WERE WELL PREPARED and clearly explained the part parents were to play as teachers in Saturday School
- LIKED THE PARENTS both as parents and as people.
- MOTIVATED PARENTS to do more with their children than they had done before.

00099

summary

SATURDAY SCHOOL IS A SCHOOL AND HOME LEARNING PROGRAM FOR ALL FOUR YEAR OLDS in a large suburban school district. The program places special emphasis on the early identification and remediation of those pupils found to have learning problems.

The main components of the program are:

- A three-hour morning or afternoon session each Saturday of the school year for all four year olds in the district. . . with parents providing follow-up learning experiences in the home during the week.
- The diagnosis of every enrolled child and follow up with those indicating a special need.
- Use of parents as assistant teachers in the classroom.
- Home visits by teachers or teacher-specialists, scheduled according to pupils' needs.

THE PROJECT HAS BEEN SUPPORTED for the last three years through Title III, Sec. 306 funds. The per pupil cost of the program is approximately $175 a year.

THE 44 OBJECTIVES OF THE SATURDAY SCHOOL PROGRAM WERE EVALUATED YEARLY. These objectives specified the desired areas of change in pupils, parents and staff during the program year. Pupils and parents were also followed up into the beginning primary grades.

00100

SOME OF THE MAJOR FINDINGS from the three years of project operation are highlighted below:

- Students averaged a gain of

  15 months or more in mental
  11 months in perceptual age, and
  16 months in language age

  during the seven months of participation in the project.

- Saturday School students scored higher in academic readiness than did their kindergarten controls.

- Handicapped Saturday School students scored higher in academic readiness than did their non-handicapped kindergarten controls.

- Saturday School students scored higher than their first grade controls in academic achievement.

- Handicapped Saturday School pupils scored as high or higher in academic achievement than did their non-handicapped first grade controls.

- Parents rated their children higher in personal and social development, language and concept development, and motor skill development after participation in the Saturday School program.

- Saturday School students were rated higher than their kindergarten controls by their parents in language and concept development, motor skill development, and interests and experiences.

- Handicapped Saturday School students significantly improved in their responsiveness to learning activities and their achievement of concepts presented in the home teaching sessions.

00101

- Parent attitudes toward the home teaching sessions, the teacher, and the child were significantly higher at the end of each project year than at the beginning.

- The vast majority of parents were judged to be using appropriate reinforcement and teaching techniques in their stints as Saturday School teaching assistants by the end of each project year.

- By the end of the third project year, ALL teachers were judged to be effective in their demonstrations of teaching techniques to parents and to themselves, using positive reinforcement and motivation techniques with pupils.

At the end of the three-year funding period, ALL main objectives of the project were validated by a panel of experts appointed by the Office of Education.

Readers interested in the results obtained with specific handicapped groups of pupils, such as the "Learning Disabled" and the "Emotionally Handicapped" should refer to "Providing for the Preschool Child With Problems."

For detailed descriptions of the processes used in diagnosing pupils with problems, the reader is referred to "Screening and Diagnostic Procedures for the Preschooler."

00102

APPENDIX A-1

TEACHER RATINGS OF PUPILS' SKILL DEVELOPMENT
DURING THE FIRST PROJECT YEAR (N=748)

Skill Objectives	Date of Achievement: Prior to October	October November	December January	February March	April May	Not Achieved	Blank
1. Identifies 6 or more colors	397 (54%)	227 (31%)	45 (6%)	24 (3%)	14 (2%)	28 (4%)	13
2. Identifies shapes: circle, square, triangle, rectangle	116 (16%)	356 (48%)	119 (16%)	64 (9%)	51 (7%)	33 (4%)	9
3. Touches and names parts of the body	340 (46%)	322 (44%)	39 (5%)	19 (3%)	6 (1%)	8 (1%)	14
4. Speaks in sentences of five or more words	578 (78%)	96 (13%)	33 (4%)	18 (2%)	8 (1%)	6 (1%)	9
5. Articulates clearly	521 (71%)	99 (13%)	9 (1%)	13 (2%)	9 (1%)	83 (11%)	14
6. Tells his whole name	311 (42%)	286 (39%)	49 (7%)	37 (5%)	27 (4%)	24 (3%)	14
7. Counts from 1 to 10 or beyond	311 (42%)	215 (29%)	116 (16%)	42 (6%)	21 (3%)	29 (4%)	14
8. Throws and catches a ball	205 (28%)	341 (46%)	115 (16%)	36 (5%)	23 (3%)	14 (2%)	14
9. Uses crayons with control	225 (31%)	275 (37%)	124 (17%)	62 (8%)	30 (4%)	18 (2%)	14
10. Uses scissors with control	135 (18%)	267 (36%)	182 (25%)	70 (10%)	45 (6%)	35 (5%)	14

00103

APPENDIX A-1 (continued)

Skill Objectives	Date of Achievement: Prior to October	October November	December January	February March	April May	Not Achieved	Blank
11. Identifies size differences: big, little; long, short; etc.	110 (15%)	305 (41%)	228 (31%)	49 (7%)	36 (5%)	15 (2%)	5
12. Sequences rods, objects from shortest to longest	53 (7%)	276 (37%)	276 (37%)	63 (8%)	45 (6%)	29 (4%)	6
13. Identifies and constructs sets of 1 to 5	75 (10%)	270 (36%)	263 (35%)	45 (6%)	56 (8%)	32 (4%)	7
14. Reproduces shapes: circle, square, triangle, rectangle	20 (3%)	148 (20%)	199 (27%)	161 (22%)	102 (14%)	113 (15%)	5
15. Works a puzzle of 10 or more pieces	106 (14%)	274 (37%)	249 (33%)	47 (6%)	32 (4%)	36 (5%)	4
16. Walks a balance beam without stepping off	26 (4%)	208 (30%)	275 (40%)	101 (15%)	70 (10%)	15 (2%)	53
17. Demonstrates orientation concepts: in, out; around, through; etc.	45 (6%)	168 (23%)	384 (52%)	75 (10%)	53 (7%)	19 (3%)	4
18. Takes turns and shares	114 (15%)	361 (48%)	154 (21%)	67 (9%)	25 (3%)	24 (3%)	3
19. Expresses feelings in acceptable ways	115 (15%)	293 (39%)	179 (24%)	59 (8%)	58 (8%)	40 (5%)	4
20. Describes objects as to size, weight, texture	11 (1%)	22 (3%)	395 (53%)	206 (28%)	63 (8%)	50 (7%)	1
21. Identifies and constructs sets of 0 - 10	28 (4%)	29 (4%)	278 (38%)	141 (19%)	102 (14%)	155 (21%)	15

001104

APPENDIX A-1 (continued)

Skill Objectives	Date of Achievement: Prior to October	October November	December January	February March	April May	Not Achieved	Blank
22. Recognizes numerals 1-5	67 (9%)	92 (12%)	371 (50%)	115 (15%)	51 (7%)	52 (7%)	0
23. Recognizes numerals 0-10	27 (4%)	63 (9%)	218 (32%)	192 (28%)	70 (10%)	118 (17%)	60
24. Reproduces a simple pattern from memory	0 (0%)	103 (14%)	284 (38%)	138 (19%)	158 (21%)	59 (8%)	6
25. Follows a series of two or more directions given simultaneously	17 (2%)	32 (4%)	228 (31%)	289 (39%)	131 (18%)	48 (6%)	3
26. Claps or marches in time with music	6 (1%)	14 (2%)	254 (34%)	211 (28%)	143 (19%)	120 (16%)	0
27. Follows left to right progression in tracking and drawing	4 (1%)	20 (3%)	247 (33%)	160 (21%)	190 (25%)	126 (17%)	1
28. Associates numerals 1 to 5 with their corresponding sets	28 (4%)	58 (8%)	269 (37%)	241 (33%)	80 (11%)	51 (7%)	21
29. Associates numerals 0 to 10 with their corresponding sets	7 (1%)	33 (5%)	99 (14%)	264 (37%)	118 (16%)	201 (28%)	26
30. Identifies a few letters of the alphabet	84 (11%)	62 (8%)	110 (15%)	299 (41%)	99 (14%)	77 (11%)	17
31. Identifies many letters of the alphabet	17 (2%)	29 (4%)	91 (13%)	199 (27%)	134 (19%)	254 (35%)	24
32. Distinguishes words that rhyme	0 (0%)	3 (<1%)	16 (2%)	269 (37%)	221 (30%)	220 (30%)	19

00105

APPENDIX A-1 (continued)

Skill Objectives	Prior to October	Date of Achievement: October November	December January	February March	April May	Not Achieved	Blank
33. Includes major body parts and features in drawing a person	4 (1%)	11 (1%)	72 (10%)	300 (41%)	213 (29%)	136 (18%)	12
34. Shows self-confidence in trying new activities	35 (5%)	104 (15%)	117 (17%)	257 (37%)	109 (15%)	82 (12%)	44
35. Tells how things are alike or different, as to size, shape, color, etc.	0 (0%)	4 (1%)	72 (10%)	159 (22%)	341 (47%)	149 (21%)	23
36. Makes relevant verbal contributions in group conversation or discussion	5 (1%)	15 (2%)	71 (10%)	140 (20%)	303 (43%)	166 (24%)	48
37. Understands and applies the terms more than and less than	0 (0%)	17 (2%)	47 (6%)	114 (15%)	404 (55%)	158 (21%)	8
38. Prints his first name correctly	2 (<1%)	29 (4%)	125 (17%)	148 (20%)	275 (38%)	148 (20%)	21
39. Consistently completes a task	11 (2%)	72 (10%)	107 (15%)	154 (22%)	256 (36%)	111 (16%)	37

APPENDIX A-2

A SUMMARY OF TEACHERS' RATINGS
of
PUPILS' SKILL DEVELOPMENT (N=680)

Item	Achieved as of January	Achieved as of June	Not yet achieved	Blank
Personal and Social Development				
1. Child takes turns and shares	445 (65%)	191 (28%)	44 (6%)	0
2. Child expresses feelings in acceptable ways	404 (59%)	190 (28%)	86 (13%)	0
3. Child consistently completes a task	299 (44%)	261 (38%)	120 (18%)	0
4. Child shows self confidence in trying out new activities	313 (46%)	265 (39%)	102 (15%)	0
Language Development				
1. Child speaks in sentences of 5 or more words	641 (94%)	31 (5%)	8 (1%)	0
2. Child articulates clearly	558 (82%)	44 (6%)	78 (11%)	0
3. Child tells his whole name	603 (89%)	70 (10%)	7 (1%)	0
4. Child touches and names parts of the body	576 (85%)	91 (13%)	13 (2%)	0
5. Child describes objects as to size, weight, texture	151 (22%)	415 (61%)	113 (17%)	1
6. Child tells how things are alike or different as to size, shape, color, etc.	105 (15%)	425 (62%)	150 (22%)	0
7. Child follows a series of two or more directions	252 (37%)	344 (51%)	83 (12%)	1
8. Child identifies a few letters of the alphabet	271 (40%)	367 (54%)	42 (6%)	0

Continued

00107

APPENDIX A-2 (continued)

Item	Achieved as of January	Achieved as of June	Not yet achieved	Blank
9. Child identifies many letters of the alphabet	132 (19%)	329 (48%)	219 (32%)	0
10. Child distinguishes words that rhyme	60 (9%)	426 (63%)	194 (29%)	0
11. Child makes relevant verbal contributions in group conversation or discussion	133 (20%)	424 (62%)	123 (18%)	0
Math and Science Concept Development				
1. Child identifies 6 or more colors	551 (81%)	92 (14%)	37 (5%)	0
2. Child identifies shapes: circle, square, triangle, rectangle	505 (74%)	135 (20%)	40 (6%)	0
3. Child reproduces above shapes	271 (40%)	280 (41%)	129 (19%)	0
4. Child counts from 1 to 10 or beyond	539 (79%)	115 (17%)	26 (4%)	0
5. Child identifies size differences: big, little, long, short, etc.	517 (76%)	142 (21%)	21 (3%)	0
6. Child sequences rods, objects from shortest to longest	491 (72%)	139 (20%)	50 (7%)	0
7. Child reproduces a simple pattern from memory	250 (37%)	364 (54%)	66 (10%)	0
8. Child identifies and constructs sets of 1 to 5	486 (71%)	162 (24%)	32 (5%)	0
9. Child identifies and constructs sets of 0 to 10	256 (38%)	296 (44%)	128 (19%)	0

Continued

00108

APPENDIX A-2 (continued)

Item	Achieved as of January	Achieved as of June	Not yet achieved	Blank
10. Child recognizes numerals 1 to 5	480 (71%)	168 (25%)	32 (5%)	0
11. Child recognizes numerals 0 to 10	281 (41%)	247 (36%)	152 (22%)	0
12. Child associates numerals 1 to 5 with their corresponding sets	246 (36%)	388 (57%)	46 (7%)	0
13. Child associates numerals 0 to 10 with their corresponding sets	137 (20%)	359 (53%)	184 (27%)	0
14. Child understands and applies the terms more than, less than	111 (16%)	469 (69%)	100 (15%)	0
Motor Skill Development				
1. Child throws and catches a ball	532 (78%)	124 (18%)	23 (3%)	1
2. Child walks a balance beam without stepping off	244 (36%)	376 (55%)	59 (9%)	1
3. Child demonstrates orientation concepts: in-out, around-through, etc.	455 (67%)	198 (29%)	26 (4%)	1
4. Child claps or marches in time to music	144 (21%)	441 (65%)	95 (14%)	0
5. Child uses crayons with control	509 (75%)	152 (22%)	19 (3%)	0
6. Child uses scissors with control	444 (65%)	188 (28%)	48 (7%)	0
7. Child works a puzzle of 10 or more pieces	450 (66%)	180 (26%)	50 (7%)	0
8. Child includes major body parts and features in drawing a person	78 (11%)	427 (63%)	175 (26%)	0

Continued

00109

APPENDIX A-2 (continued)

Item	Achieved as of January	Achieved as of June	Not yet achieved	Blank
9. Child follows left to right progression in tracking and drawing	108 (16%)	391 (58%)	181 (27%)	0
10. Child prints his first name correctly	162 (24%)	364 (54%)	153 (22%)	1

00110

APPENDIX A-3

A SUMMARY OF TEACHERS' RATING
of
THIRD YEAR SATURDAY SCHOOL PUPILS' SKILL DEVELOPMENT (N=693)

Item	Achieved as of January	Achieved as of June	Not yet achieved
Personal and Social Development			
1. Child takes turns and shares	478 (69%)	177 (26%)	38 (5%)
2. Child expresses feelings in acceptable ways	384 (55%)	222 (32%)	87 (13%)
3. Child consistently completes a task	310 (45%)	237 (34%)	146 (21%)
4. Child shows self confidence in trying out new activities	316 (46%)	233 (34%)	144 (21%)
Language Development			
1. Child speaks in sentences of 5 or more words	640 (92%)	41 (6%)	12 (2%)
2. Child articulates clearly	405 (58%)	275 (40%)	13 (2%)
3. Child tells his whole name	592 (85%)	88 (13%)	13 (2%)
4. Child touches and names parts of the body	576 (83%)	105 (15%)	12 (2%)
5. Child describes objects as to size, weight, and texture	211 (30%)	405 (58%)	77 (11%)
6. Child tells how things are alike or different as to size, shape, color, etc.	268 (39%)	386 (56%)	39 (6%)

(continued)

00111

APPENDIX A-3 (continued)

Item	Achieved as of January	Achieved as of June	Not yet achieved
7. Child follows a series of two or more directions	67 (10%)	462 (67%)	164 (24%)
8. Child identifies a few letters of the alphabet	80 (12%)	496 (71%)	117 (17%)
9. Child identifies many letters of the alphabet	125 (18%)	345 (50%)	223 (32%)
10. Child distinguishes words that rhyme	54 (8%)	413 (60%)	226 (33%)
11. Child makes relevant verbal contributions in group conversation or discussion	192 (28%)	353 (51%)	148 (21%)
Math and Science Concept Development			
1. Child identifies 6 or more colors	214 (31%)	388 (56%)	91 (13%)
2. Child identifies shapes: circle, square, triangle, rectangle	531 (77%)	99 (14%)	63 (9%)
3. Child reproduces above shapes	477 (69%)	172 (25%)	44 (6%)
4. Child counts from 1 to 10 or beyond	522 (75%)	120 (17%)	50 (7%)
5. Child identifies size differences: big, little, long, short, etc.	527 (76%)	149 (21%)	17 (2%)

(continued)

00112

APPENDIX A-3 (continued)

Item	Achieved as of January	Achieved as of June	Not yet achieved
6. Child sequences rods, objects from shortest to longest	473 (68%)	178 (26%)	42 (6%)
7. Child reproduces a simple pattern from memory	486 (70%)	169 (24%)	38 (5%)
8. Child identifies and constructs sets of 1 to 5	200 (29%)	349 (50%)	144 (21%)
9. Child identifies and constructs sets of 0 to 10	133 (19%)	532 (77%)	28 (4%)
10. Child recognizes numerals 1 to 5	314 (45%)	284 (41%)	95 (14%)
11. Child recognizes numerals 0 to 10	396 (57%)	251 (36%)	46 (7%)
12. Child associates numerals 1 to 5 with their corresponding sets	179 (26%)	351 (51%)	163 (23%)
13. Child associates numerals 0 to 10 with their corresponding sets	205 (30%)	363 (52%)	125 (18%)
14. Child understands and applies the terms more than, less than	467 (67%)	191 (28%)	35 (5%)
<u>Motor Skill Development</u>			
1. Child catches and throws a ball	311 (45%)	306 (44%)	76 (11%)

(continued)

00113

APPENDIX A-3 (continued)

Item	Achieved as of January	Achieved as of June	Not yet achieved
2. Child walks a balance beam without stepping off	430 (62%)	244 (35%)	19 (3%)
3. Child demonstrates orientation concepts: in-out, around-through, etc.	183 (26%)	372 (54%)	138 (20%)
4. Child claps or marches in time to music	413 (60%)	258 (37%)	22 (3%)
5. Child uses crayons with control	339 (49%)	296 (43%)	58 (8%)
6. Child uses scissors with control	346 (50%)	295 (43%)	52 (7%)
7. Child works a puzzle of 10 or more pieces	124 (18%)	440 (63%)	129 (19%)
8. Child includes major body parts and features in drawing a person	28 (4%)	447 (64%)	218 (31%)
9. Child follows left to right progression in tracking and drawing	149 (21%)	351 (51%)	193 (28%)
10. Child prints his first name correctly	191 (28%)	360 (52%)	142 (20%)

00114